

FIG. 1

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		10	20	30	40	50	60	70
							
AAV5	1	MSFVDHPPDWLEE-VGEGLREFLGLEAGPPKPKPNQQHQDQARGLVLPGYNYLGPNGLDRGEPVNRAD						
AAV3-3	1	MAADGYLPDWLEDNLSEGIREWALKPGVPQPKANQQHQDNRRLGLVLPGYKYLGPNGLDKGEVPNEADA						
AAV4-4	1	-MTDGYLPDWLEDNLSEGVREWWALQPGAPKPKANQQHQDNARGLVLPGYKYLGPNGLDKGEVPNEADA						
AAV1-A	1	MAADGYLPDWLEDNLSEGIREWWDLKPAPKPKANQQKQDDGRGLVLPGYKYLGPNGLDKGEVPNEADA						
hu.46-A	1	MAADGYLPDWLEDNLSEGIQWQWKLKPGPPPPKPAERHKDDSRGLVLPGYKYLGPNGLDKGEVPNEADA						
hu.48-A	1	MAADGYLPDWLEDNLSEGIREWWDLKPAPKPKANQQKQDDGRGLVLPGYKYLGPNGLDKGEVPNEADA						
hu.44-A	1	MAADGYLPDWLEDNLSEGIQWQWKLKPGPPPPKPAERHKDDSRGLVLPGYKYLGPNGLDKGEVPNEADA						
hu.43-A	1	MAADGYLPDWLEDNLSEGIREWWDLKPAPKPKANQQKQDDGRGLVLPGYKYLGPNGLDKGEVPNEADA						
AAV6-A	1	MAADGYLPDWLEDNLSEGIREWWDLKPAPKPKANQQKQDDGRGLVLPGYKYLGPNGLDKGEVPNEADA						
hu.34-B	1	MAADGYLPDWLEDNLSEGIQWQWKLKPGPPPPKPAERHKDDSRGLVLPGYKYLGPNGLDKGEVPNEADA						
hu.47-B	1	MAADGYLPDWLEDNLSEGIQWQWKLKPGPPPPKPAERHKDDSRGLVLPGYKYLGPNGLDKGEVPNEADA						
hu.29-B	1	MAADGYLPDWLEDNLSEGIQWQWKLKPGPPPPKPAERHKDDSRGLVLPGYKYLGPNGLDKGEVPNEADA						
hu.63-B	1	MAADGYLPDWLEDNLSEGIQWQWKLKPGPPPPKPAERHKDDSRGLVLPGYKYLGPNGLDKGEVPNEADA						
hu.56-B	1	MAADGYLPDWLEDNLSEGIQWQWKLKPGPPPPKPAERHKDDSRGLVLPGYKYLGPNGLDKGEVPNEADA						
hu.45-B	1	MAADGYLPDWLEDNLSEGIQWQWKLKPGPPPPKPAERHKDDSRGLVLPGYKYLGPNGLDKGEVPNEADA						
hu.57-B	1	MAADGYLPDWLEDNLSEGIQWQWKLKPGPPPPKPAERHKDDSRGLVLPGYKYLGPNGLDKGEVPNEADA						
hu.35-B	1	MAADGYLPDWLEDNLSEGIQWQWKLKPGPPPPKPAERHKDDSRGLVLPGYKYLGPNGLDKGEVPNEADA						
hu.58-B	1	MAADGYLPDWLEDNLSEGIQWQWKLKPGPPPPKPAERHKDDSRGLVLPGYKYLGPNGLDKGEVPNEADA						
hu.28-B	1	MAADGYLPDWLEDNLSEGIQWQWKLKPGPPPPKPAERHKDDSRGLVLPGYKYLGPNGLDKGEVPNEADA						
hu.51-B	1	MAADGYLPDWLEDNLSEGIQWQWKLKPGPPPPKPAERHKDDSRGLVLPGYKYLGPNGLDKGEVPNEADA						
hu.19-B	1	MAADGYLPDWLEDNLSEGIQWQWKLKPGPPPPKPAERHKDDSRGLVLPGYKYLGPNGLDKGEVPNEADA						
hu.49-B	1	MAADGYLPDWLEDNLSEGIQWQWKLKPGPPPPKPAERHKDDSRGLVLPGYKYLGPNGLDKGEVPNEADA						
hu.52-B	1	MAADGYLPDWLEDNLSEGIQWQWKLKPGPPPPKPAERHKDDSRGLVLPGYKYLGPNGLDKGEVPNEADA						
hu.13-B	1	MAADGYLPDWLEDNLSEGIQWQWKLKPGPPPPKPAERHKDDSRGLVLPGYKYLGPNGLDKGEVPNEADA						
AAV2-B	1	MAADGYLPDWLEDNLSEGIQWQWKLKPGPPPPKPAERHKDDSRGLVLPGYKYLGPNGLDKGEVPNEADA						
hu.20-B	1	MAADGYLPDWLEDNLSEGIQWQWKLKPGPPPPKPAERHKDDSRGLVLPGYKYLGPNGLDKGEVPNEADA						
hu.24-B	1	MAADGYLPDWLEDNLSEGIQWQWKLKPGPPPPKPAERHKDDSRGLVLPGYKYLGPNGLDKGEVPNEADA						
hu.64-B	1	MAADGYLPDWLEDNLSEGIQWQWKLKPGPPPPKPAERHKDDSRGLVLPGYKYLGPNGLDKGEVPNEADA						

FIG. 2A

hu. 27-B	1	MAADGYLPDWLEDTLSEGIRQWWKLPKPGPPPKPAERHKDDSRGLVLPGYKYLGFNGLDKGEPVNEADA
hu. 21-B	1	MAADGYLPDWLEDTLSEGIRQWWKLPKPGPPPKPAERHKDDSRGLVLPGYKYLGFNGLDKGEPVNEADA
hu. 22-B	1	MAADGYLPDWLEDTLSEGIRQWWKLPKPGPPPKPAERHKDDSRGLVLPGYKYLGFNGLDKGEPVNEADA
hu. 23-B	1	MAADGYLPDWLEDTLSEGIRQWWKLPKPGPPPKPAERHKDDSRGLVLPGYKYLGFNGLDKGEPVNEADA
hu. 7-C	1	MAADGYLPDWLEDTLSEGIRQWWKLPKPGPPPKPAERHKDDSRGLVLPGYKYLGFNGLDKGEPVNEADA
hu. 61-C	1	MAADGYLPDWLEDTLSEGIRQWWKLPKPGPPPKPAERHKDDSRGLVLPGYKYLGFNGLDKGEPVNEADA
rh. 56-C	1	MAADGYLPDWLEDTLSEGIRQWWKLPKPGPPPKPAERHKDDSRGLVLPGYKYLGFNGLDKGEPVNEADA
hu. 9-C	1	MAADGYLPDWLEDTLSEGIRQWWKLPKPGPPPKPAERHQDNRGLVLPGYKYLGFNGLDKGEPVNEADA
hu. 54-C	1	MAADGYLPDWLEDTLSEGIRQWWKLPKPGPPPKPAERHKDDSRGLVLPGYKYLGFNGLDKGEPVNEADA
hu. 53-C	1	MAADGYLPDWLEDTLSEGIRQWWKLPKPGPPPKPAERHKDDSRGLVLPGYKYLGFNGLDKGEPVNEADA
hu. 60-C	1	MAADGYLPDWLEDTLSEGIRQWWKLPKPGPPPKPAERHKDDSRGLVLPGYKYLGFNGLDKGEPVNEADA
hu. 55-C	1	MAADGYLPDWLEDTLSEGIRQWWKLPKPGPPPKPAERHKDDSRGLVLPGYKYLGFNGLDKGEPVNEADA
hu. 2-C	1	MAADGYLPDWLEDTLSEGIRQWWKLPKPGPPPKPAERHKDDSRGLVLPGYKYLGFNGLDKGEPVNEADA
hu. 1-C	1	MAADGYLPDWLEDTLSEGIRQWWKLPKPGPPPKPAERHKDDSRGLVLPGYKYLGFNGLDKGEPVNEADA
hu. 18-C	1	MAADGYLPDWLEDTLSEGIRQWWKLPKPGPPPKPAERHKDDSRGLVLPGYKYLGFNGLDKGEPVNEADA
hu. 3-C	1	MAADGYLPDWLEDTLSEGIRQWWKLPKPGPPPKPAERHKDDSRGLVLPGYKYLGFNGLDKGEPVNEADA
hu. 25-C	1	MAADGYLPDWLEDTLSEGIRQWWKLPKPGPPPKPAERHKDGSRLVLPGYKYLGFNGLDKGEPVNEADA
hu. 15-C	1	MAADGYLPDWLEDTLSEGIRQWWKLPKPGPPPKPAERHKDDSRGLVLPGYKYLGFNGLDKGEPVNEADA
hu. 16-C	1	MAADGYLPDWLEDTLSEGIRQWWKLPKPGPPPKPAERHKDDSRGLVLPGYKYLGFNGLDKGEPVNEADA
hu. 11-C	1	MAADGYLPDWLEDTLSEGIRQWWKLPKPGPPPKPAERHQDNRGLVLPGYKYLGFNGLDKGEPVNEADA
hu. 10-C	1	MAADGYLPDWLEDTLSEGIRQWWKLPKPGPPPKPAERHQDNRGLVLPGYKYLGFNGLDKGEPVNEADA
hu. 4-C	1	MAADGYLPDWLEDTLSEGIRQWWKLPKPGPPPKPAERHKDDSRGLVLPGYKYLGFNGLDKGEPVNEADA
rh. 54-D	1	MAADGYLPDWLEDTLSEGIRQWWKLPKPGAPKPKANQQKDDGRLVLPGYKYLGFNGLDKGEPVNAADA
rh. 48-D	1	MAADGYLPDWLEDTLSEGIRQWWKLPKPGAPKPKANQQKDDGRLVLPGYKYLGFNGLDKGEPVNAADA
rh. 55-D	1	MAADGYLPDWLEDTLSEGIRQWWKLPKPGAPKPKANQQKDDGRLVLPGYKYLGFNGLDKGEPVNAADA
rh. 62-D	1	MAADGYLPDWLEDTLSEGIRQWWKLPKPGAPKPKANQQKDDGRLVLPGYKYLGFNGLDKGEPVNAADA
AAV7-D	1	MAADGYLPDWLEDTLSEGIRQWWKLPKPGAPKPKANQQKDDGRLVLPGYKYLGFNGLDKGEPVNAADA
rh. 52-E	1	MAADGYLPDWLEDTLSEGIRQWWKLPKPGAPKPKANQQKDDGRLVLPGYKYLGFNGLDKGEPVNAADA
rh. 51-E	1	MVADGYLPDWLEDTLSEGIRQWWKLPKPGAPKPKANQQKDDGRLVLPGYKYLGFNGLDKGEPVNAADA
hu. 39-E	1	MAADGYLPDWLEDTLSEGIRQWWKLPKPGAPKPKANQQKDDGRLVLPGYKYLGFNGLDKGEPVNAADA

FIG. 2B

rh. 53-E	1	MAADGYLPDWLEDNLSEGI	REWWDLKPGAPKPKANQQKQDDGRGLVLP	PGYKYLGP	FNGLDKGEPVNAADA
hu. 37-E	1	MAADGYLPDWLEDNLSEGI	REWWDLKPGAPKPKANQQKQDDGRGLVLP	PGYKYLGP	FNGLDKGEPVNAADA
rh. 43-E	1	MAADGYLPDWLEDNLSEGI	REWWDLKPGAPKPKANQQKQDDGRGLVLP	PGYKYLGP	FNGLDKGEPVNAADA
rh. 50-E	1	MAADGYLPDWLEDNLSEGI	REWWDLKPGAPKPKANQQKQDDGRGLVLP	PGYKYLGP	FNGLDKGEPVNAADA
rh. 49-E	1	MAADGYLPDWLEDNLSEGI	REWWDLKPGAPKPKANQQKQDDGRGLVLP	PGYKYLGP	FNGLDKGEPVNAADA
rh. 61-E	1	MAADGYLPDWLEDNLSEGI	REWWDLKPGAPKPKANQQKQDDGRGLVLP	PGYKYLGP	FNGLDKGEPVNAADA
hu. 41-E	1	MAADGYLPDWLEDNLSEGI	REWWDLKPGAPKPKANQQKQDDGRGLVLP	PGYKYLGP	FNGLDKGEPVNAADA
rh. 64-E	1	MAADGYLPDWLEDNLSEGI	REWWDLKPGAPKPKANQQKQDDGRGLVLP	PGYKYLGP	FNGLDKGEPVNAADA
hu. 42-E	1	MAADGYLPDWLEDNLSEGI	REWWDLKPGAPKPKANQQKQDDGRGLVLP	PGYKYLGP	FNGLDKGEPVNAADA
rh. 57-E	1	MAADGYLPDWLEDNLSEGI	REWWDLKPGAPKPKANQQKQDDGRGLVLP	PGYKYLGP	FNGLDKGEPVNAADA
hu. 40-E	1	MAADGYLPDWLEDNLSEGI	REWWDLKPGAPKPKANQQKQDDGRGLVLP	PGYKYLGP	FNGLDKGEPVNAADA
AAV8-E	1	MAADGYLPDWLEDNLSEGI	REWWDLKPGAPKPKANQQKQDDGRGLVLP	PGYKYLGP	FNGLDKGEPVNAADA
rh. 58-E	1	MAADGYLPDWLEDNLSEGI	REWWDLKPGAPKPKANQQKQDDGRGLVLP	PGYKYLGP	FNGLDKGEPVNAADA
rh. 40-E	1	MAADGYLPDWLEDNLSEGI	REWWDLKPGAPKPKANQQKQDDGRGLVLP	PGYKYLGP	FNGLDKGEPVNAADA
hu. 67-E	1	MAADGYLPDWLEDNLSEGI	REWWDLKPGAPKPKANQQKQDDGRGLVLP	PGYKYLGP	FNGLDKGEPVNAADA
hu. 17-E	1	MAADGYLPDWLEDNLSEGI	REWWDLKPGAPKPKANQQKQDDGRGLVLP	PGCYKYLGP	FNGLDKGEPVNAADA
hu. 6-E	1	MAADGYLPDWLEDNLSEGI	REWWDLKPGAPKPKANQQKQDDGRGLVLP	PGYKYLGP	FNGLDKGEPVNAADA
hu. 66-E	1	MAADGYLPDWLEDNLSEGI	REWWDLKPGAPKPKANQQKQDDGRGLVLP	PGYKYLGP	FNGLDKGEPVNAADA
rh. 38-E	1	MAADGYLPDWLEDNLSEGI	REWWDLKPGAPKPKANQQKQDDGRGLVLP	PGYKYLGP	FNGLDKGEPVNAADA
hu. 32-F	1	MAADGYLPDWLEDNLSEGI	REWWDLKPGAPKPKANQQKQDDGRGLVLP	PGYKYLGP	FNGLDKGEPVNAADA
AAV9/hu	1	MAADGYLPDWLEDNLSEGI	REWWDLKPGAPKPKANQQKQDDGRGLVLP	PGYKYLGP	FNGLDKGEPVNAADA
hu. 31-F	1	MAADGYLPDWLEDNLSEGI	REWWDLKPGAPKPKANQQKQDDGRGLVLP	PGYKYLGP	FNGLDKGEPVNAADA

AAV5	70
AAV3-3	71	VAREHDISYNEQLEAGDNPYLYKYNHADAEEFQEKLAADTSFGGNLGKAVFQAKKRVLEPFG-LVEEGAKTA
AAV4-4	70	AALEHDKAYDQQLKAGDNPYLYKYNHADAEEFQERLQEDTSFGGNLGRAVFQAKKRILEPLG-LVEEAAKTA
AAV1-A	71	AALEHDKAYDQQLKAGDNPYLYKYNHADAEEFQERLQEDTSFGGNLGRAVFQAKKRILEPLG-LVEQAGETA
hu. 46-A	71	AALEHDKAYDRQLDSGDNPYLYKYNHADAEEFQERLKEDTSFGGNLGRAVFQAKKRILEPLG-LVEEGAKTA

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hu. 48-A 71 AALEHDKAYDQQLKAGDNPYLRYNHADAEEFQERLQEDTSFGGNLGRAVFAQAKKRVLEPLG-LVEEGA KTA
hu. 44-A 71 AALEHDKAYDRQLDSGDNPYLYKYNHADAEEFQERLKEDTSFGGNLGRAVFAQAKKRVLEPLG-LVEEGA E KTA
hu. 43-A 71 AALEHDKAYDQQLKAGDNPYPRYNHADAEEFQERLQEDTPFGGNLGRAVFAQAKKRVLEPLG-LVEEAA KTA
AAV6-A 71 AALEHDKAYDQQLKAGDNPYLRYNHADAEEFQERLQEDTSFGGNLGRAVFAQAKKRVLEPFG-LVEEGA KTA
hu. 34-B 71 AALEHDKAYDRQLDSGDNPYLYKYNHADAEEFQERLKEDTSFGGNLGRAVFAQAKKRVLEPLG-LVEE P V KTA
hu. 47-B 71 AALEHDKAYDRQLDSGDNPYLYKYNHADAEEFQERLKEDTSFGGNLGRAVFAQAKKRVLEPLG-LVGE P V KTA
hu. 29-B 71 AALEHDKAYDRQLDSGDNPYLYKYNHADAEEFQERLKEDTSFGGNLGRAVFAQAKKRVLEPLG-LVEE P V KTA
hu. 63-B 71 AALEHDKAYDRQLDSGDNPYLYKYNHADAEEFQERLKEDTSFGGNLGRAVFAQAKKRVLEPLG-LVEE P V KTA
hu. 56-B 71 AALEHDKAYDRQLDSGDNPYLYKYNHADAEEFQERLKEDTSFGGNLGRAVFAQAKKRVLEPLG-LVEE P V KTA
hu. 45-B 71 AALEHDKAYDRQLDSGDNPYLYKYNHADAEEFQERLKEDTSFGGNLGRAVFAQAKKRVLEPLG-LVEE P V KTA
hu. 57-B 70 AALEHDKAYDRQLDSGDNPYLYKYNHADAEEFQERLKEDTSFGGNLGRAVFAQAKKRVLEPLG-LVEE P V KTA
hu. 35-B 71 AALEHDKAYDRQLDSGDNPYLYKYNHADAEEFQERLKEDTSFGGNLGRAVFAQAKKRVLEPLG-LVEE P V KTA
hu. 58-B 71 AALEHDKAYDRQLDSGDNPYLYKYNHADAEEFQERLKEDTSFGGNLGRAVFAQAKKRVLEPLG-LVEE P V KTA
hu. 28-B 71 AALEHDKAYDRQLDSGDNPYLYKYNHADAEEFQERLKEDTSFGGNLGRAVFAQAKKRVLEPLS-LVEE P V KTA
hu. 51-B 71 AALEHDKAYDRQLDSGDNPYLYKYNHADAEEFQERLKEDTSFGGNLGRAVFAQAKKRVLEPLG-LVGE P V KTA
hu. 19-B 71 AALEHDKAYDRQLDSGDNPYLYKYNHADAEEFQERLKEDTSFGGNLGRAVFAQAKKRVLEPLG-LVEE P V KTA
hu. 49-B 71 AALEYDKAYDRQLDSGDNPYLYKYNHADAEEFQERLKEDTSFGGNLGRAVFAQAKKRVLEPLG-LVEE P V KTA
hu. 52-B 71 AALEHDKAYDRQLDSGDNPYLYKYNHADAEEFQERLKEDTSFGGNLGRAVFAQAKKRVLEPLG-LVGE P V KTA
hu. 13-B 71 AALEHDKAYDRQLDSGDNPYLYKYNHADAEEFQERLKEDTSFGGNLGRAVFAQAKKRVLEPLG-LVEE P V KTA
AAV2-B 71 AALEHDKAYDRQLDSGDNPYLYKYNHADAEEFQERLKEDTSFGGNLGRAVFAQAKKRVLEPLG-LVEE P V KTA
hu. 20-B 71 AALEHDKAYDRQLDSGDNPYLYKYNHADAEEFQERLKEDTSFGGNLGRAVFAQAKKRVLEPLG-LVEE P V KAA
hu. 24-B 71 AALEHDKAYDRQLDSGDNPYLYKYNHADAEEFQERLKEDTSFGGNLGRAVFAQAKKRVLEPLG-LVEE P V KTA
hu. 64-B 71 AALEHDKAYDRQLDSGDNPYLYKYNHADAEEFQERLKEDTSFGGNLGRAVFAQAKKRVLEPLG-LVEE P V KTA
hu. 27-B 71 AALEHDKAYDRQLDSGDNPYLYKYNHADAEEFQERLKEDTSFGGNLGRAVFAQAKKRVLEPLG-LVEE P V KTA
hu. 21-B 71 AALEHDKAYDRQLDSGDNPYLYKYNHADAEEFQERLKEDTSFGGNLGRAVFAQAKKRVLEPLG-LVEE P V KTA
hu. 22-B 71 AALEHDKAYDRQLDSGDNPYLYKYNHADAEEFQERLKEDTSFGGNLGRAVFAQAKKRVLEPLG-LVEE P V KTA
hu. 23-B 71 AALEHDKAYDRQLDSGDNPYLYKYNHADAEEFQERLKEDTSFGGNLGRAVFAQAKKRVLEPLG-LVEE P V KTA
hu. 7-C 71 AALEHDKAYDRQLDSGDNPYLYKYNHADAEEFQERLKEDTSFGGNLGRAVFAQAKKRVLEPLG-LVEG P V KTA
hu. 61-C 71 AALEHDKAYDRQLDSGDNPYLYKYNHADAEEFQERLKEDTSFGGNLGRAVFAQAKKRVLEPLG-LVEE P V KTA
rh. 56-C 71 AALEHDKAYDRQLDSGDNPYLYKYNHADAEEFQERLKEDTSFGGNLGRAVFAQAKKRVLEPLG-LVEE P V KTA

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rh. 64-E	71	AALEHDKAYDQQLKAGDNPYLRYNHADA	EFQERLQEDTSFGGNLGRAVFQAKKRVLEPLG-LVEEGA	KTA
hu. 42-E	71	AALEHDKAYDQQLKAGDNPYLRYNHADA	EFQERLQEDTSFGGNLGRAVFQAKKRVLEPLG-LVEEAA	AKTA
rh. 57-E	71	AALEHDKAYDQQLKAGDNPYLRYNHADA	EFQERLQEDTSFGGNLGRAVFQAKKRVLEPLG-LVEEGA	AKTA
hu. 40-E	71	AALEHDKAYDQQLKAGDNPYLRYNHADA	EFQERLQEDTSFGGNLGRAVFQAKKRVLEPLG-LVEEAA	AKTA
AAV8-E	71	AALEHDKAYDQQLKAGDNPYLRYNHADA	EFQERLQEDTSFGGNLGRAVFQAKKRVLEPLG-LVEEGA	AKTA
rh. 58-E	71	AALEHDKAYDQQLKAGDNPYLRYNHADA	EFQERLQEDTSFGGNLGRAVFQAKKRVLEPLG-LVEEAA	AKTA
rh. 40-E	71	AALEHDKAYDQQLKAGDNPYLRYNHADA	EFQERLQEDTSFGGNLGRAVFQAKKRVLEPLG-LVEEAA	AKTA
hu. 67-E	71	AALEHDKAYDQQLKAGDNPYLRYNHADA	EFQERLQEDTSFGGNLGRAVFQAKKRVLEPLG-LVEEAA	AKTA
hu. 17-E	71	AALEHDKAYDQQLKAGDNPYLRYNHADA	EFQERLQEDTSFGGNLGRAVFQAKKRVLEPLG-LVEEGA	AKTA
hu. 6-E	71	AALEHDKAYDQQLKAGDNPYLRYNHADA	EFQERLQEDTSFGGNLGRAVFQAKKRVLEPLG-LVEEGA	AKTA
hu. 66-E	71	AALEHDKAYDQQLKAGDNPYLRYNHADA	EFQERLQEDTSFGGNLGRAVFQAKKRVLEPLG-LVEEGA	AKTA
rh. 38-E	71	AALEHDKAYDQQLKAGDNPYLRYNHADA	EFQERLQEDTSFGGNLGRAVFQAKKRVLEPLG-LVEEAA	AKTA
hu. 32-F	71	AALEHDKAYDQQLKAGDNPYLRYNHADA	EFQERLQEDTSFGGNLGRAVFQAKKRVLEPLG-LVEEAA	AKTA
AAV9/hu	71	AALEHDKAYDQQLKAGDNPYLRYNHADA	EFQERLQEDTSFGGNLGRAVFQAKKRVLEPLG-LVEEAA	AKTA
hu. 31-F	71	AALEHDKAYDQQLKAGDNPYLRYNHADA	EFQERLQEDTSFGGNLGRAVFQAKKRVLEPLG-LVEEAA	AKTA

AAV5	139	PTGKRIDDHFP-----	-----KRKKARTEEDSKPSTSSDAEAGPSG	QQQIQIPAQPASSLGADTMSAGG
AAV3-3	140	PGKKGAVDQSPQ-EPDSSSGVGKSGKQPA	RKRLNFGQTDSESVDP-PQPLGEPPAAPTSL	SGSNTMASGG
AAV4-4	139	PGKKRPLIESPQ-QPDSSSTGIGKKGQPA	KKKLVFEDETGAGDGP---PEGSTSGAMS--	DDSEMRAAA
AAV1-A	140	PGKKRPVEQSPQ-EPDSSSGIGKTGQQPA	KKRLNFGQTDSESVDP-PQPLGEPPATPAA	AVGPTTMSAGG
hu. 46-A	140	PGKKRPVEQSPQ-EPDSSSGIGKTGQQPA	KKRLNFGQTDSESVDP-PQPLGEPPATPAA	AVGPTTMSAGG
hu. 48-A	140	PGKKRPVEQSPQ-EPDSSSGIGKTGQQPA	KKRLNFGQTDSESVDP-PQPLGEPPATPAA	AVGPTTMSAGG
hu. 44-A	140	PGKKRPVEQSPQ-GPDSSSGIGKTGQQPA	KKRLNFGQTDSESVDP-PQPLGEPPATPAA	AVGPTTMSAGG
hu. 43-A	140	PGKKRPVEPSPQRS	PDSSSTGIGKKGQQPAKKRLNFGQTDSESVDP-PQPIGEPPAGPSGLSGTMAAGG	
AAV6-A	140	PGKKRPVEQSPQ-EPDSSSGIGKTGQQPA	KKRLNFGQTDSESVDP-PQPLGEPPATPAA	AVGPTTMSAGG
hu. 34-B	140	PGKKRPVEHSPV-EPDSSSGTGKAGQQPA	RKRLNFGQTDADSVDP-PQPLGQPPAAPSG	GLGTNTMATGS
hu. 47-B	140	PGKKRPVEHSPV-EPDSSSGTGKAGQQPA	RKRLNFGQTDADSVDP-PQPLGQPPAAPSG	GLGTNTMATGS
hu. 29-B	140	PGKKRPVEHSPA-EPDSSSGTGKSGNQPA	RKRLNFGQTDSDSVDP-PQPLGQPPAAPSG	GLGTNTMATGS

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hu. 63-B 140 PGKKRPVEHSPA-EPDSSSGTGKAGQQPARKRLNFGQTGDADSVDP-PQPLGQPPAAPSGLGTTNTMATGS
hu. 56-B 140 PGKKRPVEHSPV-EPDSSSGTGKAGNQPARKRLNFGQTGDADSVDP-PQPLGQPPASPGLGTTNTMATGS
hu. 45-B 140 PGKKRPVEHSPV-EPDSSSGTGKAGQQPARKRLNFGQTGDADSVDP-PQPLGQPPAAPSGLGTTNTMATGS
hu. 57-B 139 PGKKRPVEHSPV-EPDSSSGTGKAGNQPARKRLNFGQTGDADSVDP-PQPLGQPPAAPSGLGTTNTMATGS
hu. 35-B 140 PGKKRPVEHSPV-EPDSSSGTGKAGQQPARKRLNFGQTGDADSVDP-PQPLGQPPAAPSGLGTTNTMATGS
hu. 58-B 140 PGKKRPVEHSPV-EPDSSSGTGKAGNQPARKRLNFGQTGDADSVDP-PQPLGQPPAAPSGLGTTNTMATGS
hu. 28-B 140 PGKKRPVEHSPA-EPDSSSGTGKSGNQPARKRLNFGQTGDSDSVDP-PQPLGQPPAAPSGLGTTNTMATGS
hu. 51-B 140 PGKKRPVEHSPV-EPDSSSGTGKAGQQPARKRLNFGQTGDADSVDP-PQPLGQPPAAPSGLGTTNTMATGS
hu. 19-B 140 PGEKRPVEHSPA-EPDSSSGTGKAGQQPARKRLNFGQTGDADSVDP-PQPLGQPPAAPSGLGTTNTMATGS
hu. 49-B 140 PGKKRPVEHSPV-EPDSSSGTGKAGQQPARKRLNFGQTGDADSVDP-PQPLGQPPAAPSGLGTTNTMATGS
hu. 52-B 140 PGKKRPVEHSPV-EPDSSSGTGKAGQQPARKRLNFGQTGDADSVDP-PQPLGQPPAAPSGLGTTNTMATGS
hu. 13-B 140 PGKKRPVEHSPA-EPDSSSGTGKAGQQPARKRLNFGQTGDADSVDP-PQPLGQPPAAPSGLGTTNTMATGS
AAV2-B 140 PGKKRPVEHSPV-EPDSSSGTGKAGQQPARKRLNFGQTGDADSVDP-PQPLGQPPAAPSGLGTTNTMATGS
hu. 20-B 140 PGEKRPVEHSPA-EPDSSSGTGKAGQQPARKRLNFGQTGDADSVDP-PQPLGQPPAAPSGLGTTNTMATGS
hu. 24-B 140 PGKKRPVEHSPA-EPDSSSGTGKAGQQPARKRLNFGQTGDADSVDP-PRPLGQPPAAPSGLGTTNTMATGS
hu. 64-B 140 PGKKRPVEHSLA-EPDSSSGTGKAGQQPARRRLNFGQTGDADSVDP-PQPLGQPPAAPSGLGTTNTMATGS
hu. 27-B 140 PGKKRPVEHSPA-EPDSSSGTGKAGQQPARKRLNFGQTGDADSVDP-PQPLGQPPAAPSGLGTTNTMATGS
hu. 21-B 140 PGKKRPVEHSPA-EPDSSSGTGKAGQQPARKRLNFGQTGDADSVDP-PRPLGQPPAAPSGLGTTNTMATGS
hu. 22-B 140 PGKKRPVEHSPA-EPDSSSGTGKAGQQPARKRLNFGQTGDADSVDP-PQPLGQPPAAPSGLGTTNTMATGS
hu. 23-B 140 PGKKRPVEHSPA-EPDSSSGTGKAGQQPARKRLNFGQTGDADSVDP-PQPLGQPPAAPSGLGTTNTMATGS
hu. 7-C 140 PGKKRPVEHSPA-EPDSSSGTGKAGQQPARKRLNFGQTGDADSVDP-PQPLGQPPAAPSGLGSTTMATGS
hu. 61-C 140 PGKKRPVEHPPV-EPDSSSGTGKAGQQPARKRLNFGQTGDADSVDP-PQPLGQPPAAPSGLGSTTMATGS
rh. 56-C 140 PGKKRPVEHSPA-EPDSSSGTGKAGQQPARKRLNFGQTGDADSVDP-PQPLGQPPAAPSGLGSTTMATGS
hu. 9-C 140 PGKKRPVEHSPV-EPDSSSGTGKAGHQPARKRLNFGQTGDADSVDP-PQPLGQPPAAPTSLGSTTMATGS
hu. 54-C 140 PGKKRPVEHSPA-EPDSSSGTGKAGQQPARKRLNFGQTGDADSVDP-PQPLGQPPAAPTSLGSTTMATGS
hu. 53-C 140 PGKKRPVEHSPA-EPDSSSGTGKAGQQPARKRLNFGQTGDADSVDP-PQPLRQPPAAPTSLGSTTMATGS
hu. 60-C 140 PGKKRPVEHSPV-EPDSSSGTGKAGQQPARKRLNFGQTGDADSVDP-PQPLGQPPAAPSGLGSTTMATGS
hu. 55-C 140 PGKKRPVEHSPA-EPDSSSGTGKAGQQPARKRLNFGQTGDADSVDP-PQPLGQPPAAPTSLGSTTMATGS
hu. 2-C 140 PGKKRPVEHSPV-EPDSSSGTGKAGQRPARKRLNFGQTGDADSVDP-PQPLGQPPAAPSGLGSTTMATGS
hu. 1-C 140 PGKKRPVEHSPV-EPDSSSGTGKAGQQPARKRLNFGQTGDADSVDP-PQPLGQPPAAPSGLGSTTMATGS

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hu.18-C 140 PGKKRPVEHSPV-EPDSSSGTGKAGQQPARKRLNFGQTGDADSVDP-PQPLGQPPAAPSGLGSTTMAAGS
 hu.3-C 141 PGKKRPVEHSPV-EPDSSSGTGKAGQQPARKRLNFGQTGDADSVDP-PQPLGQPPAAPSGLGSTTMAAGS
 hu.25-C 140 PGKKRPVEHSPA-EPDSSSGTGKAGQQPARKRLNFGQTGDADSVDP-PQPLGQPPAAPSGLGSTTMAAGS
 hu.15-C 140 PGKKRPVEHSPV-EPDSSSGTGKAGNQPARKRLNFGQTGDADSVDP-PQPLGQPPAAPSGLGSTTMAAGS
 hu.16-C 140 PGKKRPVEHSPV-EPDSSSGTGKAGNQPARKRLNFGQTGDADSVDP-PQPLGQPPAAPSGLGSTTMAAGS
 hu.11-C 140 PGKKRPVEHSPV-EPDSSSGTGKAGHQPARKRLNFGQTGDADSVDP-PQPLGQPPAAPSTSLGSTTMAAGS
 hu.10-C 140 PGKKRPVEHSPV-EPDSSSGTGKAGHQPARKRLNFGQTGDADSVDP-PQPLGQPPAAPSTSLGSTTMAAGS
 hu.4-C 140 PGKKRPVEHSPV-EPDSSSGTGKAGQQPARKRLNFGQTGDADSVDP-PQPLGQPPAAPSGLGSTTMAAGS
 rh.54-D 140 PGKKRPVEPSQSPDSSSTGIGKKGQQPARKRLNFGQTGDSESVDP-PQPLGEPAGPSGLSGSTMAAGG
 rh.48-D 140 PGKKRPVEPSQSPDSSSTGIGKKGQQPARKRLNFGQTGDSESVDP-PQPLGEPAGPSGLSGSTMAAGG
 rh.55-D 140 PGKKRPVEPSQSPDSSSTGIGKKGQQPARKRLNFGQTGDSESVDP-PQPLGEPAPSSVSGSGTMAAGG
 rh.62-D 140 PGKKRPVEPSQSPDSSSTGIGKKGQQPARKRLNFGQTGDSESVDP-PQPLGEPAGPSGLSGSTMAAGG
 AAV7-D 140 PAKKRPVEPSQSPDSSSTGIGKKGQQPARKRLNFGQTGDSESVDP-PQPLGEPAPSSVSGSGTVAAGG
 rh.52-E 140 PGKKRPVEPSQSPDSSSTGIGKKGQQPARKRLNFGQTGDSESVDP-PQPLGEPAPSSVSGSGTMAAGG
 rh.51-E 140 PGKKRPVEPSQSPDSSSTGIGKKGQQPARKRLNFGQTGDSESVDP-PQPLGEPAPSSVSGSGTMAAGG
 hu.39-E 140 PGKKRPVEPSQSPDSSSTGIGKKGQQPARKRLNFGRTGDSESVDP-PQPLGEPAPSSVSGSGTMAAGG
 rh.53-E 140 PGKKRPVEPSQSPDSSSTGIGKKGQQPARKRLNFGQTGDSESVDP-PQPLGEPAPSSVSGSGTMAAGG
 hu.37-E 140 PGKKRPVEPSQSPDSSSTGIGKKGQQPARKRLNFGQTGDSESVDP-PQPLGEPAGPSGLSGSTMAAGG
 rh.43-E 140 PGKKRPVEQSPQ-EPDSSSGTGKAGQQPARKRLNFGQTGDSESVDP-PQPLGEPAPSGVGPNTMAAGG
 rh.50-E 140 PGKKRPVEPSQSPDSSSTGIGKKGQQPARKRLNFGQTGDSESVDP-PQPLGEPAPSSVSGSGTMAAGG
 rh.49-E 140 PGKKRPVEPSQSPDSSSTGIGKKGQQPARKRLNFGQTGDSESVDP-PQPLGEPAPSSVSGSGTMAAGG
 rh.61-E 140 PGKKRPVEPSQSPDSSSTGIGKKGQQPARKRLNFGQTGDSESVDP-PQPLGEPAPSSVSGSGTMAAGG
 hu.41-E 140 PGKKRPVEPPQSPDSSSTGIGKKGQQPARKRLNFGQTGDSESVDP-PQPLGEPAGPSGLSGSTMAAGG
 rh.64-E 140 PGKKRPVEPSQSPDSSSTGIGKKGQQPARKRLNFGQTGDSESVDP-PQPLGEPAPSSVSGSGTMAAGG
 hu.42-E 140 PGKKRPVEPSQSPDSSSTGIGKKGQQPARKRLNFGQTGDSESVDP-PQPLGEPAGPSGLSGSTMAAGG
 rh.57-E 140 PGKKRPVEPSQSPDSSSTGIGKKGQQPARKRLNFGQTGDSESVDP-PQPLGEPAPSSVSGSGTMAAGG
 hu.40-E 140 PGKKRPVEPSQSPDSSSTGIGKKGQQPARKRLNFGQTGDSESVDP-PQPLGEPAGPSGLSGSTMAAGG
 AAV8-E 140 PGKKRPVEPSQSPDSSSTGIGKKGQQPARKRLNFGQTGDSESVDP-PQPLGEPAPSGVGPNTMAAGG
 rh.58-E 140 PGKKRPVEPSQSPDSSSTGIGKKGQQPARKRLNFGQTGDSESVDP-PQPLGEPAPSSVSGSGTMAAGG
 rh.40-E 140 PGKKRPVEPSQSPDSSSTGIGKKGQQPARKRLNFGQTGDSESVDP-PQPLGEPAGPSGLSGSTMAAGG

FIG. 2H

hu. 67-E 140 PGKKRPVEPSPQSPDSSTGIGKKGQPAKKRLNFGQTGDSESVDP-PQIGEPAGPSGLSGTMAAGG
 hu. 17-E 140 PGKKRPVEPSPQSPDSSTGIGKTGQPAKKRLNFGQTGDSESVDP-PQIGEPAGPSGLSGTMAAGG
 hu. 6-E 140 PGKKRPVEPSPQSPDSSTGIGKTGQPAKKRLNFGQTGDSESVDP-PQIGEPAGPSGLSGTMAAGG
 hu. 66-E 140 PGKKRPVEPSPQSPDSSTGIGKTGQPAKKRLNFGQTGDSESVDP-PQIGEPAGPSGLSGTMAAGG
 rh. 38-E 140 PGKKRPVEPSPQSPDSSTGIGKTGQPAKKRLNFGQTGDSESVDP-PQIGEPAGPSGLSGTMAAGG
 hu. 32-F 140 PGKKRPVEQSPQ-EPDSSAGIGKSGSQPAKKKLNFGQTGDSESVDP-PQIGEPAPPSGVGSLTMASSG
 AAV9/hu 140 PGKKRPVEQSPQ-EPDSSAGIGKSGAQPAKKRLNFGQTGDSESVDP-PQIGEPAPPSGVGSLTMASSG
 hu. 31-F 140 PGKKRPVEQSPQ-EPDSSAGIGKSGSQPAKKKLNFGQTGDSESVDP-PQIGEPAPPSGVGSLTMASSG

	220	230	240	250	260	270	280
						
AAV5	198	GGPLGDNNGADGVGNASGDWHDSTWMDRVTSTRTWVLPSTYNNHLYREIKS-GSVDGSNANAYFGY					
AAV3-3	208	GAPMADNNEGADGVGNSSGNWHDSTWMDRVTSTRTWVLPSTYNNHLYKQIS--SQSGASNDNHYFGY					
AAV4-4	202	GGAAVEGGQADGVGNASGDWHDSTWSEGHVTTSTRTWVLPSTYNNHLYKRLG-----ESLQSNNTYNGF					
AAV1-A	208	GAPMADNNEGADGVGNASGNWHDSTWLGDRVITSTRTWVLPSTYNNHLYKQISS-ASTGASNDNHYFGY					
hu. 46-A	208	GAPMADNNEGADGVGNASGNWHDSTWLGDRVITSTRTWVLPSTYNNHLYKQISS-ASTGASNDNHYFGY					
hu. 48-A	208	GAPMADNNEGADGVGNASGNWHDSTWLGDRVITSTRTWVLPSTYNNHLYKQISS-TSTGASNDNHYFGY					
hu. 44-A	208	GAPMADNNEGADGVGNASGNWHDSTWLGDRVITSTRTWVLPSTYNNHLYKQISS-ASTGASNDNHYFGY					
hu. 43-A	209	GAPMADNNEGADGVGNASGNWHDSTWLGDRVITSTRTWVLPSTYNNHLYKQISS-ASTGASNDNHYFGY					
AAV6-A	208	GAPMADNNEGADGVGNASGNWHDSTWLGDRVITSTRTWVLPSTYNNHLYKQISS-ASTGASNDNHYFGY					
hu. 34-B	208	GAPMADNNEGADGVGNSSGNWHDSTWMDRVTSTRTWVLPSTYNNHLYKQIS--SQSGASNDNHYFGY					
hu. 47-B	208	GAPMADNNEGADGVGNSSGNWHDSTWMDRVTSTRTWVLPSTYNNHLYKQIS--SQSGASNDNHYFGY					
hu. 29-B	208	GAPMADNNEGADGVGNSSGNWHDSTWMDRVTSTRTWVLPSTYNNHLYKQIS--SQSGASNDNHYFGY					
hu. 63-B	208	GAPMADNNEGADGVGNSSGNWHDSTWMDRVTSTRTWVLPSTYNNHLYKQIS--SQSGASNDNHYFGY					
hu. 56-B	208	GAPMADNNEGADGVGNSSGNWHDSTWMDRVTSTRTWVLPSTYNNHLYKQIS--SQSGASNDNHYFGY					
hu. 45-B	208	GAPMADNNEGADGVGNSSGNWHDSTWMDRVTSTRTWVLPSTYNNHLYKQIS--SQSGASNDNHYFGY					
hu. 57-B	207	GAPMADNNEGADGVGNSSGDWHDSTWMDRVTSTRTWVLPSTYNNHLYKQIS--SQSGASNDNHYFGY					
hu. 35-B	208	GAPMADNNEGADGVGNSSGNWHDSTWMDRVTSTRTWVLPSTYNNHLYKQIS--SQSGASNDNHYFGY					
hu. 58-B	208	GAPMADNNEGADGVGNSSGNWHDSTWMDRVTSTRTWVLPSTYNNHLYKQIS--SQSGASNDNHYFGY					
hu. 28-B	208	GAPMADNNEGADGVGNSSGNWHDSTWMDRVTSTRTWVLPSTYNNHLYKQIS--SQSGASNDNHYFGY					

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hu. 51-B 208 GAPMADNNEGADGVGNSSGNWCHCDSTWMDRVIITSTRTWALPTYNNHLYKQIS--SQSGASNDNHYFGY
hu. 19-B 208 GAPMADNNEGADGVGNSSGNWYCDSTWMDRVIITSTRTWALPTYNNHLYKQIS--SQSGASNDNHYFGY
hu. 49-B 208 GAPMADNNEGADGVGNSSGNWCHCDSTWMDRVIITSTRTWALPTYNNHLYKQIS--SQSGASNDNHYFGY
hu. 52-B 208 GAPMADNNEGADGVGNSSGNRCHCDSTWMDRVIITSTRTWALPTYNNHLYRQIS--SQSGASNDNHYFGY
hu. 13-B 208 GAPMADNNEGADGVGNSSGNWCHCDSTWMDRVIITSTRTWALPTYNNHLYKQIS--SQSGASNDNHYFGY
AAV2-B 208 GAPMADNNEGADGVGNSSGNWCHCDSTWMDRVIITSTRTWALPTYNNHLYKQIS--SQSGASNDNHYFGY
hu. 20-B 208 GAPMADNNEGADGVGNSSGNWCHCDSTWMDRVIITSTRTWALPTYNNHLYKQIS--SQSGASNDNHYFGY
hu. 24-B 208 GAPMADNNEGADGVGNSSGNWCHCDSTWMDRVIITSTRTWALPTYNNHLYKQIS--SQSGASNDNHYFGY
hu. 64-B 208 GAPMADNNEGADGVGNSSGNWCHCDSTWMDRVIITSTRTWALPTYNNHLYRQIS--SQSGASNDNHYFGY
hu. 27-B 208 GAPMADNNEGADGVGNSSGNWCHCDSTWMDRVIITSTRTWALPTYNNHLYKQIS--SQSGASNDNHYFGY
hu. 21-B 208 GAPMADNNEGADGVGNSSGNWCHCDSTWMDRVIITSTRTWALPTYNNHLYKQIS--SQSGASNDNHYFGY
hu. 22-B 208 GAPMADNNEGADGVGNSSGNWCHCDSTWMDRVIITSTRTWALPTYNNHLYKQIS--SQSGASNDNHYFGY
hu. 23-B 208 GAPMADNNEGADGVGNSSGNWCHCDSTWMDRVIITSTRTWALPTYNNHLYKQIS--SQSGASNDNHYFGY
hu. 7-C 208 GAPMADNNEGADGVGNSSGNWCHCDSTWMDRVIITSTRTWALPTYNNHLYKQIS--SQSGASNDNHYFGY
hu. 61-C 208 GAPMADNNEGADGVGNSSGNWCHCDSTWMDRVIITSTRTWALPTYNNHLYKQIS--SQSGASNDNHYFGY
rh. 56-C 208 GAPMADNNEGADGVGNSSGNWCHCDSTWMDRVIITSTRTWALPTYNNHLYKQIS--SQSGASNDNHYFGY
hu. 9-C 208 GAPMADNNEGADGVGNSSGNWCHCDSTWMDRVIITSTRTWALPTYNNHLYKQIS--SQSGASNDNHYFGY
hu. 54-C 208 GAPMADNNEGADGVGNSSGNWCHCDSTWMDRVIITSTRTWALPTYNNHLYKQIS--SQSGASNDNHYFGY
hu. 53-C 208 GAPMADNNEGADGVGNSSGNWCHCDSTWMDRVIITSTRTWALPTYNNHLYKQIS--SQSGASNDNHYFGY
hu. 60-C 208 GAPMADNNEGADGVGNSSGNWCHCDSTWMDRVIITSTRTWALPTYNNHLYKQIS--SQSGASNDNHYFGY
hu. 55-C 208 GAPMADNNEGADGVGNSSGNWCHCDSTWMDRVIITSTRTWALPTYNNHLYKQIS--SQSGASNDNHYFGY
hu. 2-C 208 GAPMADNNEGADGVGNSSGNWCHCDSTWMDRVIITSTRTWALPTYNNHLYKQIS--SQSGASNDNHYFGY
hu. 1-C 208 GAPMADNNEGADGVGNSSGNWCHCDSTWMDRVIITSTRTWALPTYNNHLYKQIS--SQSGASNDNHYFGY
hu. 18-C 208 GAPMADNNEGADGVGNSSGNWCHCDSTWMDRVIITSTRTWALPTYNNHLYKQIS--SQSGASNDNHYFGY
hu. 3-C 209 GAPMADNNEGADGVGNSSGNWCHCDSTWMDRVIITSTRTWALPTYNNHLYKQIS--SQSGACNDNHYFGY
hu. 25-C 208 GAPMADNNEGADGVGNSSGNWCHCDSTWMDRVIITSTRTWALPTYNNHLYKQIS--SQSGASNDNHYFGY
hu. 15-C 208 GAPMADNNEGADGVGNSSGNWCHCDSTWMDRVIITSTRTWALPTYNNHLYKQIS--SQSGASNDNHYFGY
hu. 16-C 208 GAPMADNNEGADGVGNSSGNWCHCDSTWMDRVIITSTRTWALPTYNNHLYKQIS--SQSGASNDNHYFGY
hu. 11-C 208 GAPMADNNEGADGVGNSSGNWCHCDSTWMDRVIITSTRTWALPTYNNHLYKQIS--SQSGASNDNHYFGY
hu. 10-C 208 GAPMADNNEGADGVGNSSGNWCHCDSTWMDRVIITSTRTWALPTYNNHLYKQIS--SQSGASNDNHYFGY

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hu.4-C 208 GAPMADNNEGADGVGNSSGNWHCDSQWLGLDRVITTTSTRTWALPTYNNHLYKQISS--SQSGASNDNHYFGY
 rh.54-D 209 GAPMADNNEGADGVGNASGNWHCDSTWLGLDRVITTTSTRTWALPTYNNHLYKQISS-QSAGSTNDNVYFGY
 rh.48-D 209 GAPMADNNEGADGVGNASGNWHCDSTWLGLDRVITTTSTRTWALPTYNNHLYKQISS-QSAGSTNDNVYFGY
 rh.55-D 209 GAPMADNNEGADGVGNSSGNWHCDSTWLGLDRVITTTSTRTWALPTYNNHLYKQISS-QSAGSTNDNVYFGY
 rh.62-D 209 GAPMADNNEGADGVGNASGNWHCDSTWLGLDRVITTTSTRTWALPTYNNHLYKQISS-QSAGSTNDNVYFGY
 AAV7-D 209 GAPMADNNEGADGVGNASGNWHCDSTWLGLDRVITTTSTRTWALPTYNNHLYKQISS-ETAGSTNDNTYFGY
 rh.52-E 209 GAPMADNNEGADGVGNSSGNWHCDSTWLGLDRVITTTSTRTWALPTYNNHLYKQISSNGTSGGSTNDNTYFGY
 rh.51-E 209 GAPMADNNEGADGVGNSSGNWHCDSTWLGLDRVITTTSTRTWALPTYNNHLYKQISSNGTSGGSTNDNTYFGY
 hu.39-E 209 GAPMADNNEGADGVGNSSGNWHCDSTWLGLDRVITTTSTRTWALPTYNNHLYKQISSNGTSGGSTNDNTYFGY
 rh.53-E 209 GAPMADNNEGADGVGNSSGNWHCDSTWLGLDRVITTTSTRTWALPTYNNHLYKQISSNGTSGGSTNDNTYFGY
 hu.37-E 209 GAPMADNNEGADGVGNSSGNWHCDSTWLGLDRVITTTSTRTWALPTYNNHLYKQISSNGTSGGSTNDNTYFGY
 rh.43-E 208 GAPMADNNEGADGVGNSSGNWHCDSTWLGLDRVITTTSTRTWALPTYNNHLYKQISSNGTSGGATNDNTYFGY
 rh.50-E 209 GAPMADNNEGADGVGNSSGNWHCDSTWLGLDRVITTTSTRTWALPTYNNHLYKQISSNGTSGGSTNDNTYFGY
 rh.49-E 209 GAPMADNNEGADGVGNSSGNWHCDSTWLGLDRVITTTSTRTWALPTYNNHLYKQISSNGTSGGSTNDNTYFGY
 rh.61-E 209 GAPMADNNEGADGVGNSSGNWHCDSTWLGLDRVITTTSTRTWALPTYNNHLYKQISSNGTSGGSTNDNTYFGY
 hu.41-E 209 GAPMADNNEGADGVGNSSGNWHCDSTWLGLDRVITTTSTRTWALPTYNNHLYKQISSNGTSGGSTNDNTYFGY
 rh.64-E 209 GAPMADNNEGADGVGNSSGNWHCDSTWLGLDRVITTTSTRTWALPTYNNHLYKQISSNGTSGGSTNDNTYFGY
 hu.42-E 209 GAPMADNNEGADGVGNSSGNWHCDSTWLGLDRVITTTSTRTWALPTYNNHLYKQISSNGTSGGSTNDNTYFGY
 rh.57-E 209 GAPMADNNEGADGVGNSSGNWHCDSTWLGLDRVITTTSTRTWALPTYNNHLYKQISSNGTSGGSTNDNTYFGY
 hu.40-E 209 GAPMADNNEGADGVGNSSGNWHCDSTWLGLDRVITTTSTRTWALPTYNNHLYKQISSNGTSGGSTNDNTYFGY
 AAV8-E 209 GAPMADNNEGADGVGNSSGNWHCDSTWLGLDRVITTTSTRTWALPTYNNHLYKQISSNGTSGGATNDNTYFGY
 rh.58-E 209 GAPMADNNEGADGVGNSSGNWHCDSTWLGLDRVITTTSTRTWALPTYNNHLYKQISSNGTSGGSTNDNTYFGY
 rh.40-E 209 GAPMADNNEGADGVGNSSGNWHCDSTWLGLDRVITTTSTRTWALPTYNNHLYKQISSNGTSGGSTNDNTYFGY
 hu.67-E 209 GAPMADNNEGADGVGNSSGNWHCDSTWLGLDRVITTTSTRTWALPTYNNHLYKQISSNGTSGGSTNDNTYFGY
 hu.17-E 209 GAPMADNNEGADGVGNSSGNWHCDSTWLGLDRVITTTSTRTWALPTYNNHLYKQISSNGTSGGSTNDNTYFGY
 hu.6-E 209 GAPMADNNEGADGVGNSSGNWHCDSTWLGLDRVITTTSTRTWALPTYNNHLYKQISSNGTSGGSTNDNTYFGY
 hu.66-E 209 GAPMADNNEGADGVGNSSGNWHCDSTWLGLDRVITTTSTRTWALPTYNNHLYKQISSNGTSGGSTNDNTYFGY
 rh.38-E 209 GAPMADNNEGADGVGNSSGNWHCDSTWLGLDRVITTTSTRTWALPTYNNHLYKQISSNGTSGGSTNDNTYFGY
 hu.32-F 208 GAPVADNNEGADGVGNSSGNWHCDSTWLGLDRVITTTSTRTWALPTYNNHLYKQISSNSTSGSSNDNAYFGY
 AAV9/hu 208 GAPVADNNEGADGVGNSSGNWHCDSTWLGLDRVITTTSTRTWALPTYNNHLYKQISSNSTSGSSNDNAYFGY

FIG. 2K

hu.31-F	208	GAPVADNNEGADGVGSSGNWHCDSQLGLDRVITTTSTRTWALPTYNNHLYKQISNSTSGGSSNDNAYFGY	290	300	310	320	330	340	350
								
AAV5	267	STPWGYFDENRFHSHWSPRDWQRLINNYWGFRPRSLRVKIFNIQVKEVTVDSTTTIANNLSTVQVFTD							
AAV3-3	276	STPWGYFDENRFHCHFSRPDWQRLINNNWGFRPKKLSFKLFNIQVRGVTQNDGTTIANNLSTVQVFTD							
AAV4-4	267	STPWGYFDENRFHCHFSRPDWQRLINNNWGMRPKAMRVKIFNIQVKEVTTSGETTANNLTSTVQIFAD							
AAV1-A	277	STPWGYFDENRFHCHFSRPDWQRLINNNWGFRPKRLNFKLFNIQVKEVTNDGVTIANNLSTVQVFS							
hu.46-A	277	STPWGYFDENRFHCHFSRPDWQRLINNNWGFRPKRLNFKLFNIQVKEVTNDGVTIANNLSTVQVFS							
hu.48-A	277	GTPWGYFDENRFHCHFSRPDWQRLINNNWGFRPKRLNFKLFNIQVEEVTNDGVTIANNLSTVQVFS							
hu.44-A	277	STPWGYFDENRFHCHFSRPDWQRLINNNWGFRPKRLNFKLFNIQVKEVTNDGVTIANNLSTVQVFS							
hu.43-A	278	STPWGYFDENRFHCHFSRPDWQRLINNNWGFRPKRLNFKLFNIQVKEVTNDGVTIANNLSTVQVFS							
AAV6-A	277	STPWGYFDENRFHCHFSRPDWQRLINNNWGFRPKRLNFKLFNIQVKEVTNDGVTIANNLSTVQVFS							
hu.34-B	276	STPWGYFDENRFHCHFSRPDWQRLINNNWGFRPKRLNFKLFNIQVKEVTQNDGTTIANNLSTVQVFTD							
hu.47-B	276	STPWGYFDENRFHCHFSRPDWQRLINNNWGFRPKRLNFKLFNIQVKEVTQNDGTTIANNLSTVQVFTD							
hu.29-B	276	STPWGYFDENRFHCHFSRPDWQRLINNNWGFRPKRLNFKLFNIQVKEVTQNDGTTIANNLSTVQVFTD							
hu.63-B	276	STPWGYFDENRFHCHFSRPDWQRLINNNWGFRPKRLNFKLFNIQVKEVTQNDGTTIANNLSTVQVFTD							
hu.56-B	276	STPWGYFDENRFHCHFSRPDWQRLINNNWGFRPKRLNFKLFNIQVKEVTQNDGTTIANNLSTVQVFTD							
hu.45-B	276	STPWGYFDENRFHCHFSRPDWQRLINNNWGFRPKRLNFKLFNIQVKEVTQNDGTTIANNLSTVQVFTD							
hu.57-B	275	STPWGYFDENRFHCHFSRPDWQRLINNNWGFRPKRLNFKLFNIQVKEVTQNDGTTIANNLSTVQVFTD							
hu.35-B	276	STPWGYFDENRFHCHFSRPDWQRLINNNWGFRPKRLNFKLFNIQVKEVTQNDGTTIANNLSTVQVFTD							
hu.58-B	276	STPWGYFDENRFHCHFSRPDWQRLINNNWGFRPKRLNFKLFNIQVREVTQNDGTTIANNLSTVQVFTD							
hu.28-B	276	STPWGYFDENRFHCHFSRPDWQRLINNNWGFRPKRLNFKLFNIQVKEVTQNDGTTIANNLSTVQVFTD							
hu.51-B	276	STPWGYFDENRFHCHFSRPDWQRLINNNWGFRPKRLNFKLFNIQVKEVTQNDGTTIANNLSTVQVFTD							
hu.19-B	276	STPWGYFDENRFHCHFSRPDWQRLINNNWGFRPKRLNFKLFNIQVKEVTQNDGTTIANNLSTVQVFTD							
hu.49-B	276	STPWGYFDENRFHCHFSRPDWQRLINNNWGFRPKRLNFKLFNIQVKEVTQNDGTTIANNLSTVQVFTD							
hu.52-B	276	STPWGYFDENRFHCHFSRPDWQRLINNNWGFRPKRLNFKLFNIQVKEVTQNDGTTIANNLSTVQVFTD							
hu.13-B	276	STPWGYFDENRFHCHFSRPDWQRLINNNWGFRPKRLNFKLFNIQVKEVTQNDGTTIANNLSTVQVFTD							
AAV2-B	276	STPWGYFDENRFHCHFSRPDWQRLINNNWGFRPKRLNFKLFNIQVKEVTQNDGTTIANNLSTVQVFTD							
hu.20-B	276	STPWGHFDENRFHCHFSRPDWQRLINNNWGFRPKRLNFKLFNIQVKEVTQNDGTTIANNLSTVQVFTD							

hu. 24-B	276	STPWGYFDFENRHFCHFS	PRDWQRLINNNW	GFRPKRLSFKLFNI	QVKEVTQNDGTTT	IANNLTSTVQVFTD
hu. 64-B	276	STPWGYFDFENRHFCHFS	PRDWQRLINNNW	GSRPKRLNFKLFNI	QVKEVTQNDGTTT	IANNLTSTVQVFTD
hu. 27-B	276	STPWGYFDFENRHFCHFS	PRDWQRLINNNW	GFRPKRLSFKLFNI	QVKEVTQNDGTTT	IANNLTSTVQVFTD
hu. 21-B	276	STPWGYFDFENRHFCHFS	PRDWQRLINNNW	GFRPKRLSFKLFNI	QVKEVTQNDGTTT	IANNLTSTVQVFTD
hu. 22-B	276	STPWGYFDFENRHFCHFS	PRDWQRLINNNW	GFRPKRLSFKLFNI	QVKEVTQNDGTTT	IANNLTSTVQVFTD
hu. 23-B	276	STPWGYFDFENRHFCHFS	PRDWQRLINNNW	GFRPKRLSFKLFNI	QVKEVTQNDGTTT	IANNLTSTVQVFTD
hu. 7-C	276	STPWGYFDFENRHFCHFS	PRDWQRLINNNW	GFRPKRLNFKLFNI	QVKEVTQNDGTTT	IANNLTSTVQVFTD
hu. 61-C	276	STPWGYFDFENRHFCHFS	PRDWQRLINNNW	GFRPKRLNFKLFNI	QVKEVTQNDGTTT	IANNLTSTVQVFTD
rh. 56-C	276	STPWGYFDFENRHFCHFS	PRDWQRLINNNW	GFRPKRLNFKLFNI	QVKEVTQNDGTTT	IANNLTSTVQVFTD
hu. 9-C	276	STPWGYFDFENRHFCHFS	PRDWQRLINNNW	GFRPKRLNFKLFNI	QVKEVTQNDGTTT	IANNLTSTVQVFTD
hu. 54-C	276	STPWGYFDFENRHFCHFS	PRDWQRLINNNW	GFRPKRLNFKLFNI	QVKEVTQNDGTTT	IANNLTSTVQVFTD
hu. 53-C	276	STPWGYFDFENRHFCHFS	PRDWQRLINNNW	GFRPKRLNFKLFNI	QVKEVTQNDGTTT	IANNLTSTVQVFTD
hu. 60-C	276	STPWGYFDFENRHFCHFS	PRDWQRLINNNW	GFRPKRLNFKLFNI	QVKEVTQNDGTTT	IANNLTSTVQVFTD
hu. 55-C	276	STPWGYFDFENRHFCHFS	PRDWQRLINNNW	GFRPKRLNFKLFNI	QVKEVTQNDGTTT	IANNLTSTVQVFTD
hu. 2-C	276	STPWGYFDFENRHFCHFS	PRDWQRLINNNW	GFRPKRLNFKLFNI	QVKEVTQNDGTTT	IANNLTSTVQVFTD
hu. 1-C	276	STPWGYFDFENRHFCHFS	PRDWQRLINNNW	GFRPKRLNFKLFNI	QVKEVTQNDGTTT	IANNLTSTVQVFTD
hu. 18-C	276	STPWGYFDFENRHFCHFS	PRDWQRLINNSW	GFRPKRLNFKLFNI	QVKEVTQNDGTTT	IANNLTSTVQVFTD
hu. 3-C	277	STPWGYFDFENRHFCHFS	PRDWQRLINNSW	GFRPKRLNFKLFNI	QVKEVTQNDGTTT	IANNLTSTVQVFTD
hu. 25-C	276	STPWGYFDFENRHFCHFS	PRDWQRLINNNW	GFRPKRLNFKLFNI	QVKEVTQNDGTTT	IANNLTSTVQVFTD
hu. 15-C	276	STPWGYFDFENRHFCHFS	PRDWQRLINNNW	GFRPKRLNFKLFNI	QVKEVTQNDGTTT	IANNLTSTVQVFTD
hu. 16-C	276	STPWGYFDFENRHFCHFS	PRDWQRLINNNW	GFRPKRLNFKLFNI	QVKEVTQNDGTTT	IANNLTSTVQVFTD
hu. 11-C	276	STPWGYFDFENRHFCHFS	PRDWQRLINNNW	GFRPKRLNFKLFNI	QVKEVTQNDGTTT	IANNLTSTVQVFTD
hu. 10-C	276	STPWGYFDFENRHFCHFS	PRDWQRLINNNW	GFRPKRLNFKLFNI	QVKEVTQNDGTTT	IANNLTSTVQVFTD
hu. 4-C	276	STPWGYFDFENRHFCHFS	PRDWQRLVNNNR	GFRPKRLNFKLFNI	QVKEVTQNDGTTT	IANNLTSTVQVFTD
rh. 54-D	278	STPWGYFDFENRHFCHFS	PRDWQRLINNNW	GFRPKKLNFKLFNI	QVKEVTNDGVT	IANNLTSTVQVFS
rh. 48-D	278	STPWGYFDFENRHFCHFS	PRDWQRLINNSW	GFRPKKLNFKLFNI	QVKEVTNDGVT	IANNLTSTVQVFS
rh. 55-D	278	STPWGYFDFENRHFCHFS	PRDWQRLINNNW	GFRPKKLNFKLFNI	QVKEVTNDGVT	IANNLTSTVQVFS
rh. 62-D	278	STPWGYFDFENRHFCHFS	PRDWQRLINNNW	GFRPKKLNFKLFNI	QVKEVTNDGVT	IANNLTSTVQVFS
AAV7-D	278	STPWGYFDFENRHFCHFS	PRDWQRLINNNW	GFRPKKLNFKLFNI	QVKEVTNDGVT	IANNLTSTVQVFS
rh. 52-E	279	STPWGYFDFENRHFCHFS	PRDWQRLINNNW	GFRPKRLSFKLFNI	QVKEVTQNEG	KTIANSLTSTVQVFTD

rh. 51-E	279	STPWGYFDENRFHCHFS	PRDWQRLINNNWGFRPKR	LSFKLFNIQVKEVTQNEG	TKTIANNLTSTIQVFTD
hu. 39-E	279	STPWGYLDENRFHCHFS	PRDWQRLINNNWGFRPKR	LSFKLFNIQVKEVTQNEG	TKTIANNLTSTIQVFTD
rh. 53-E	279	STPWGYFDENRFHCHFS	PRDWQRLINNNWGFRPKR	LSFKLFNIQVKEVTQNEG	TKTIANNLTSTIQVFTD
hu. 37-E	279	STPWGYFDENRFHCHFS	PRDWQRLINNNWGFRPKR	LSFKLFNIQVKEVTQNEG	TKTIANNLTSTIQVFTD
rh. 43-E	278	STPWGYFDENRFHCHFS	PRDWQRLINNNWGFRPKR	LSFKLFNIQVKEVTQNEG	TKTIANNLTSTIQVFTD
rh. 50-E	279	STPWGYFDENRFHCHFS	PRDWQRLINNNWGFRPKR	LSFKLFNIQVKEVTQNEG	TKTIANNLTSTIQVFTD
rh. 49-E	279	STPWGYFDENRFHCHFS	PRDWQRLINNNWGFRPKR	LSFKLFNIQVKEVTQNEG	TKTIANNLTSTIQVFTD
rh. 61-E	279	STPWGYFDENRFHCHFS	PRDWQRLINNNWGFRPKR	LSFKLFNIQVKEVTQNEG	TKTIANNLTSTIQVFTD
hu. 41-E	279	STPWGYFDENRFHCHFS	PRDWQRLINNNWGFRPKR	LSFKLFNIQVKEVTQNEG	TKTIANNLTSTIQVFTD
rh. 64-E	279	STPWGYFDENRFHCHFS	PRDWQRLINNNWGFRPKR	LSFKLFNIQVKEVTQNEG	TKTIANNLTSTIQVFTD
hu. 42-E	279	STPWGYFDENRFHCHFS	PRDWQRLINNNWGFRPKR	LSFKLFNIQVKEVTQNEG	TKTIANNLTSTIQVFTD
rh. 57-E	279	STPWGYFDENRFHCHFS	PRDWQRLINNNWGFRPKR	LSFKLFNIQVKEVTQNEG	TKTIANNLTSTIQVFTD
hu. 40-E	279	STPWGYFDENRFHCHFS	PRDWQRLINNNWGFRPKR	LSFKLFNIQVKEVTQNEG	TKTIANNLTSTIQVFTD
AAV8-E	279	STPWGYFDENRFHCHFS	PRDWQRLINNNWGFRPKR	LSFKLFNIQVKEVTQNEG	TKTIANNLTSTIQVFTD
rh. 58-E	279	STPWGYFDENRFHCHFS	PRDWQRLINNNWGFRPKR	LSFKLFNIQVKEVTQNEG	TKTIANNLTSTIQVFTD
rh. 40-E	279	STPWGYFDENRFHCHFS	PRDWQRLINNNWGFRPKR	LSFKLFNIQVKEVTQNEG	TKTIANNLTSTIQVFTD
hu. 67-E	279	STPWGYFDENRFHCHFS	PRDWQRLINNNWGFRPKR	LSFKLFNIQVKEVTQNEG	TKTIANNLTSTIQVFTD
hu. 17-E	279	STPWGYFDENRFHCHFS	PRDWQRLINNNWGFRPKR	LSFKLFNIQVKEVTQNEG	TKTIANNLTSTIQVFTD
hu. 6-E	279	STPWGYFDENRFHCHFS	PRDWQRLINNNWGFRPKR	LSFKLFNIQVKEVTQNEG	TKTIANNLTSTIQVFTD
hu. 66-E	279	STPWGYFDENRFHCHFS	PRDWQRLINNNWGFRPKR	LSFKLFNIQVKEVTQNEG	TKTIANNLTSTIQVFTD
rh. 38-E	279	STPWGYFDENRFHCHFS	PRDWQRLINNNWGFRPKR	LSFKLFNIQVKEVTQNEG	TKTIANNLTSTIQVFTD
hu. 32-F	278	STPWGYFDENRFHCHFS	PRDWQRLINNNWGFRPKR	LSFKLFNIQVKEVTQNEG	TKTIANNLTSTIQVFTD
AAV9/hu	278	STPWGYFDENRFHCHFS	PRDWQRLINNNWGFRPKR	LSFKLFNIQVKEVTQNEG	TKTIANNLTSTIQVFTD
hu. 31-F	278	STPWGYFDENRFHCHFS	PRDWQRLINNNWGFRPKR	LSFKLFNIQVKEVTQNEG	TKTIANNLTSTIQVFTD
AAV5	337	DDYQLPYVVVNGTEG	CLPAFPQVFTLPQYGYAT	LNRD-NTENPTERS	SSFFCLEYFSPKMLRTGNNEFFT
AAV3-3	346	SEYQLPYVLGSAHQ	GCLPPFPADVMVPQYGYLT	LNNG---SQAVGRSS	FFCYCLEYFSPQMLRTGNNFQFS
AAV4-4	337	SSYELPYVMDAQEG	SLPPFPNDVMVPQYGYCGL	VTGNTSQQTDRNA	FYCLEYFSPQMLRTGNNEFIT

FIG. 2N

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AAV1-A 347 SEYQLPYVLGSAHQGCLPPFPADVEMIPQYGylTLNNG---SQAVGRSSFYCLEYFPPSQMLRTGNNFTFS
hu.46-A 347 SEYQLPYVLGSAHQGRLPPFPADVEMIPQYGylTLNNG---SQAVGRSSSYCLEYFPPSQMLRTGNNFTFS
hu.48-A 347 SEYQLPYVLGSAHQGCLPPFPADVEMIPQYGylTLNNG---SQAVGRSSFYCLEYFPPSQMLRTGNNFTFS
hu.44-A 347 SEYQLPYVLGSAHQGCLPPFPADVEMIPQYGylTLNNG---SQAVGRSSFYCLEYFPPSQMLRTGNNFTFS
hu.43-A 348 SEYQLPYVLGSAHQGCLPPFPADVEMIPQYGylTLNNG---SQAVGRSSFYCLEYFPPSQMLRTGNNFTFS
AAV6-A 347 SEYQLPYVLGSAHQGCLPPFPADVEMIPQYGylTLNNG---SQAVGRSSFYCLEYFPPSQMLRTGNNFTFS
hu.34-B 346 SEYQLPYVLGSAHQGCLPPFPADVEMIPQYGylTLNNE---SQAVGRSSFYCLEYFPPSQMLRTGNNFTFS
hu.47-B 346 SEYQLPYVLGSAHQGCLPPFPADVEMIPQYGylTLNNG---SQAVGRSSFYCLEYFPPSQMLRTGNNFTFS
hu.29-B 346 SEYQLPYVLGSAHQGCLPPFPADVEMIPQYGylTLNNG---SQAVGRSSFYCLGYFPPSQMLRTGNNFTFS
hu.63-B 346 SEYQLPYVLGSAHQGCLPPFPADVEMIPQYGylTLNNG---SQAVGRSSFYCLEYFPPSQMLRTGNNFTFS
hu.56-B 346 LEYQLPYVLGSAHQGCLPPFPADVEMIPQYGylTLNNG---SQAVGRSSFYCLEYFPPSQMLRTGNNFTFS
hu.45-B 346 SGYQLPYVLGSAHQGCLPPFPADVEMIPQYGylTLNNG---SQAVGRSSFYCLEYFPPSQMLRTGNNFTFS
hu.57-B 345 LEYQLPYVLGSAHQGCLPPFPADVEMIPQYGylTLNNG---SQAVGRSSFYCLEYFPPSQMLRTGNNFTFS
hu.35-B 346 SEYQLPYVLGSAHQGCLPPFPADVEMIPQYGylTLNNG---SQAVGRSSFYCLEYFPPSQMLRTGNNFTFS
hu.58-B 346 SEYQLPYVLGSAHQGCLPPFPADVEMIPQYGylTLNNG---SQAVGRSSFYCLEYFPPSQMLRTGNNFTFS
hu.28-B 346 SEYQLPYVLGSAHQGCLPPFPADVEMIPQYGylTLNNG---SQAVGRSSFYCLEYFPPSQMLRTGNNFTFS
hu.51-B 346 SEYQLPYVLGSAHQGCLPPFPADVEMIPQYGylTLNNG---SQAVGRSSFYCLEYFPPSQMLRTGNNFTFS
hu.19-B 346 SEYQLPYVLGSAHQGCLPPFPADVEMIPQYGylTLNNG---SQAVGRSSFYCLEYFPPSQMLRTGNNFTFS
hu.49-B 346 SEYQLPYVPGSAHQGCLPPFPADVEMIPQYGylTLNNG---SQAVGRSSFYCLEYFPPSQMLRTGNNFTFS
hu.52-B 346 SEYQLPYVLGSAHQGCLPPFPADVEMIPQYGylTLNNG---SQAVGRSSFYCLEYFPPSQMLRTGNNFTFS
hu.13-B 346 SEYQLPYVLGSAHQGCLPPFPADVEMIPQYGylTLNNG---SQAVGRSSFYCLEYFPPSQMLRTGNNFTFS
AAV2-B 346 SEYQLPYVLGSAHQGCLPPFPADVEMIPQYGylTLNNG---SQAVGRSSFYCLEYFPPSQMLRTGNNFTFS
hu.20-B 346 SEYQLPYVLGSAHQGCLPPFPADVEMIPQYGylTLNNG---SQAVGRSSFYCLEYFPPSQMLRTGNNFTFS
hu.24-B 346 SEYQLPYVLGSAHQGCLPPFPADVEMIPQYGylTLNNG---SQAVGRSSFYCLEYFPPSQMLRTGNNFTFS
hu.64-B 346 SEYQLPYVLGSAHQGCLPPFPADVEMIPQYGylTLNNG---SQAVGRSSFYCLEYFPPSQMLRTGNNFTFS
hu.27-B 346 SGYQLPYVLGSAHQGCLPPFPADVEMIPQYGylTLNNG---SQAVGRSSFYCLEYFPPSQMLRTGNNFTFS
hu.21-B 346 SEYQLPYVLGSAHQGCLPPFPADVEMIPQYGylTLNNG---SQAVGRSSFYCLEYFPPSQMLRTGNNFTFS
hu.22-B 346 SEYQLPYVLGSAHQGCLPPFPADVEMIPQYGylTLNNG---SQAVGRSSFYCLEYFPPSQMLRTGNNFTFS
hu.23-B 346 SEYQLPYVLGSAHQGCLPPFPADVEMIPQYGylTLNNG---SQAVGRSSFYCLEYFPPSQMLRTGNNFTFS
hu.7-C 346 SEYQLPYVLGSAHQGCLPPFPADVEMIPQYGylTLNNG---SQAVGRSSFYCLEYFPPSQMLRTGNNFTFS

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hu. 61-C 346 SEYQLPYVLGSAHQGCLPPFPADVFMVPQYGYLTLNNG---SQAVGRSSFYCYCLEYFPPSQMLRTGNNFQFS
 rh. 56-C 346 SEYQLPYVLGSAHQGCLPPFPADVFMVPQYGYLTLNNG---SQAVGRSSFYCYCLEYFPPSQMLRTGNNFQFS
 hu. 9-C 346 SEYPLPYVLGSAHQGCLPPFPADVFMVPQYGYLTLNNG---SQAVGRSSFYCYCLEYFPPSQMLRTGNNFTFS
 hu. 54-C 346 SEYQLPYVLGSAHQGCLPPFPADVFMVPQYGYLTLNNG---SQAVGRSSFYCYCLEYFPPSQMLRTGNNFQFS
 hu. 53-C 346 SEYQLPYVLGSAHQGCLPPFPADVFMVPQYGYLTLNNG---SQAVGRSSFYCYCLEYFPPSQMLRTGNNFQFS
 hu. 60-C 346 SEYQLPYVLGSAHQGCLPPFPADVFMVPQYGYLTLNNG---SQAVGRSSFYCYCLEYFPPSQMLRTGNNFQFS
 hu. 55-C 346 SEYQLPYVLGSAHQGCLPPFPADVFMVPQYGYLTLNNG---SQAVGRSSFYCYCLEYFPPSQMLRTGNNFQFS
 hu. 2-C 346 SEYQLPYVLGSAHQGCLPPFPADVFMVPQYGYLTLNNG---SQAVGRSSFYCYCLEYFPPSQMLRTGNNFQFS
 hu. 1-C 346 SEYQLPYVLGSAHQGCLPPFPADVFMVPQYGYLTLNNG---SQAVGRSSFYCYCLEYFPPSQMLRTGNNFQFS
 hu. 18-C 346 SEYQLPYVLGSAHQGCLPPFPADVFMVPQYGYLTLNNG---SQAVGRSSFYCYCLEYFPPSQMLRTGNNFQFS
 hu. 3-C 347 SEYQLPYVPGSAHQGCLPPFPADVFMVPQYGYLTLNNG---SQAVGRSSFYCYCLEYFPPSQMLRTGNNFQFS
 hu. 25-C 346 SEYQLPYVLGSAHQGCLPPFPADVFMVPQYGYLTLNNG---SQAVGRSPFYCYCLEYFPPSQMLRTGNNFQFS
 hu. 15-C 346 SGYQLPYVLGLAHQGCLPPFPADVFMVPQYGYLTLNNG---SQAVGRSSFYCYCLEYFPPSQMLRTGNNFQFS
 hu. 16-C 346 SEYQLPYVLGSAHQGCLPPFPADVFMVPQYGYLTLNNG---SQAVGRSSFYCYCLEYFPPSQMLRTGNNFQFS
 hu. 11-C 346 SEYQLPYVLGSAHQGCLPPFPADVFMVPQYGYLTLNNG---SQAVGRSSFYCYCLEYFPPSQMLRTGNNFTFS
 hu. 10-C 346 SEYQLPYVLGSAHQGCLPPFPADVFTVPQYGYLTLNNG---SQAVGRSSFYCYCLEYFPPSQMLRTGNNLTFFS
 hu. 4-C 346 SEYQLPYVLGSAHQGCLPPFPADVFMVPQYGYLTLNNG---SQAVGRSSFYCYCLEYFPPSQMLRTGNNFQFS
 rh. 54-D 348 SEYQLPYVLGSAHQGCLPPFPADVFMIPQYGYLTLNNG---SQSVGRSSFYCYCLEYFPPSQVLRGTGNNFTFS
 rh. 48-D 348 SEYQLPYVLGSAHQGCLPPFPADVFMIPQYGYLTLNNG---SQSVGRSSFYCYCLEYFPPSQMLRTGNNFTFS
 rh. 55-D 348 SEYQLPYVLGSAHQGCLPPFPADVFMIPQYGYLTLNNG---SQSVGRSSFYCYCLEYFPPSQMLRTGNNFTFS
 rh. 62-D 348 SEYQLPYVLGSAHQGCLPPFPADVFMIPQYGYLTLNND---SQSVGRSSFYCYCLEYFPPSQMLRTGNNFTFS
 AAV7-D 348 SEYQLPYVLGSAHQGCLPPFPADVFMIPQYGYLTLNNG---SQSVGRSSFYCYCLEYFPPSQMLRTGNNFEFS
 rh. 52-E 349 SEYQLPYVLGSAHQGCLPPFPADVFMIPQYGYLTPNNG---SQAVGRSSFYCYCLEYFPPSQMLRTGNNFSFS
 rh. 51-E 349 SEYQLPYVLGSAHQGCLPPFPADVFMIPQYGYLTLNNG---SQAVGRSSFYCYCLEYFPPSQMLRTGNNFSFS
 hu. 39-E 349 SEYQPPYVLGSAHQGCLPPFPADVFMIPQYGYLTLNNG---SQAVGRSSFYCYCLEYFPPSQMLRTGNNFSFS
 rh. 53-E 349 SEYQLPYVLGSAHQGCLPPFPADVFMIPQYGYLTLNNG---SQAVGRSSFYCYCLEYFPPSQMLRTGNNFSFS
 hu. 37-E 349 SEYQLPYVLGSAHQGCLPPFPADVFMIPQYGYLTLNNG---SQAVGRSSFYCYCLEYFPPSQMLRTGNNFEFS
 rh. 43-E 348 SEYQLPYVLGSAHQGCLPPFPADVFMIPQYGYLTLNNG---SQAVGRSSFYCYCLEYFPPSQMLRTGNNFQFT
 rh. 50-E 349 SEYQLPYVLGSAHQGCLPPFPADVFMIPQYGYLTLNNG---SQAVGRSSFYCYCLEYFPPSQMLRTGNNFSFS
 rh. 49-E 349 SEYQLPYVLGSAHQGCLPPFPADVFMIPQYGNLTLNNG---SQAVGRSSFYCYCLEYFPPSQMLRTGNNFSFS

rh. 61-E	349	SEYQLPYVLGSAHQGCLPPFPADVEMI PQYGYLTLNNG---	SQAVGRSSFYCLEYFPSQMLRTGNNFSEFS
hu. 41-E	349	SEYQLPYVLGSAHQGCLPPFPADVEMI PQYGYLTLNNG---	SQAVGRSSFYCLEYFPSQMLRTGNNFSEFS
rh. 64-E	349	SEYQLPYVLGSAHQGCLPPFPADVEMI PQYGYLTLNNG---	SQAVGRSSFYCLEYFPSQMLRTGNNFSEFS
hu. 42-E	349	SEYQLPYVLGSAHQGCLPPFPADVEMI PQYGYLTLNNG---	SQAVGRSSFYCLEYFPSQMLRTGNNFSEFS
rh. 57-E	349	SEYQLPYVLGSAHQGCLPPFPADVEMI PQYGYLTLNNG---	SQAVGRSSFYCLEYFPSQMLRTGNNFSEFS
hu. 40-E	349	SEYQLPYVLGSAHQGCLPPFPADVEMI PQYGYLTLNNG---	SQAVGRSSFYCLEYFPSQMLRTGNNFSEFS
AAV8-E	349	SEYQLPYVLGSAHQGCLPPFPADVEMI PQYGYLTLNNG---	SQAVGRSSFYCLEYFPSQMLRTGNNFQFT
rh. 58-E	349	SEYQLPYVLGSAHQGCLPPFPADVEMI PQYGYLTLNNG---	SQAVGRSSFYCLEYFPSQMLRTGNNFSEFS
rh. 40-E	349	SEYQLPYVLGSAHQGCLPPFPADVEMI PQYGYLTLNNG---	SQAVGRSSFYCLEYFPSQMLRTGNNFSEFS
hu. 67-E	349	SEYQLPYVLGSAHQGCLPPFPADVEMI PQYGYLTLNNG---	SQAVGRSSFYCLEYFPSQMLRTGNNFSEFS
hu. 17-E	349	SEYQLPYVLGSAHQGCLPPFPADVEMI PQYGYLTLNNG---	SQAVGRSSFYCLEYFPSQMLRTGNNFSEFS
hu. 6-E	349	SEYQLPYVLGSAHQGCLPPFPADVEMI PQYGYLTLNNG---	SQAVGRSSFYCLEYFPSQMLRTGNNFSEFS
hu. 66-E	349	SEYQLPYVLGSAHQGCLPPFPADVEMI PQYGYLTLNNG---	SQAVGRSSFYCLEYFPSQMLRTGNNFSEFS
rh. 38-E	349	SEYQLPYVLGSAHQGCLPPFPADVEMI PQYGYLTLNNG---	SQAVGRSSFYCLEYFPSQMLRTGNNFSEFS
hu. 32-F	348	SDYQLPYVLGSAHEGCLPPFPADVEMI PQYGYLTLNDG---	SQAVGRSSFYCLEYFPSQMLRTGNNFQFS
AAV9/hu	348	SDYQLPYVLGSAHEGCLPPFPADVEMI PQYGYLTLNDG---	SQAVGRSSFYCLEYFPSQMLRTGNNFQFS
hu. 31-F	348	SDYQLPYVLGSAHEGCLPPFPADVEMI PQYGYLTLNDG---	GQAVGRSSFYCLEYFPSQMLRTGNNFQFS

	430	440	450	460	470	480	490
						
AAV5	406	YNFEEVPFHSSFAPSQNLFKLANPLVDQYLYRFVSTN-----	NTGGVQFNKNLAGRYANTYKNWFPGP				
AAV3-3	413	YTFEDVPFHSSYAHSQSLDRMLNPLIDQYLYLNRQTGTTSGTTNQSRLLSQAGPQMSLQARNWLPGP					
AAV4-4	407	YSFEKVPFHSSYAHSQSLDRMLNPLIDQYLYLNRQTGTTGTLNAGTATNFTKLRPTNFSNFKKNWLPGP					
AAV1-A	414	YTFEEVPFHSSYAHSQSLDRMLNPLIDQYLYLNRQTQ-NQSGSAQNKDLSFSGSPAGMSVQPKNWLPGP					
hu. 46-A	414	YTFEEVPLHSSCAHSQSLDRMLNPLIDQYLYLNRQTQ-NQSGSAQNKDLSFSGSPAGMSVQPKNWLPGP					
hu. 48-A	414	YTFEEVPFHSSYAHSQSLDRMLNPLIDQYLYLNRQTQ-NQSGSAQNKDLSFSGSPAGMSVQPKNWLPGP					
hu. 44-A	414	YTFEEVPFHSSYAHSQSLDRMLNPLIDQYLYPNRQTQ-NQSGSAQNKDLSFSGSPAGMSVQPKNWLPGP					
hu. 43-A	415	YTFEEVPLHSSYAHSQSLDRMLNPLIVQYLYLNRQTQ-NQSGSAQNKDLSFSGSPAGMSVQPKNWLPGP					
AAV6-A	414	YTFEDVPFHSSYAHSQSLDRMLNPLIDQYLYLNRQTQ-NQSGSAQNKDLSFSGSPAGMSVQPKNWLPGP					
hu. 34-B	413	YTFEDVPFHSSYAHSQSLGRMLNPLIDQYLYLSRTN-TPSGTTTQSRLOFSQAGASDIRDQSRNWLPGP					

hu. 47-B 413 YTFEDVPFHSSYAHQSLSLDRMLNPLIDQYLYYLSTTN-TPSGTTTQSRQLQFSQAGASDIRDQSRNWLPGP
 hu. 29-B 413 YTFEDVPFHSSYAHQSLSLDRMLNPLIDQYLYYLSRTN-TPSGTTTQSRQLQFSQAGASDIRDQSRNWLPGP
 hu. 63-B 413 YTFEDVPFHSSYAHQSLSLDRMLNPLIDQYLYYLSRTN-TPSGTTTQSRQLQFSQAGASDIRDQSRNWLPGP
 hu. 56-B 413 YTFEDVPFHSSYAHQSLSLDRMLNPLIDQYLYYLSRTN-TPSGTTTQSRQLQFSQAGASDIRDQSRNWLPGP
 hu. 45-B 413 YTFEDVPFHSSYAHQSLSLDRMLNPLIDQYLYYLSRTN-TPSGTTTQSRQLQFSQAGASDIRDQSRNWLPGP
 hu. 57-B 412 YTFEDVPFHSSYAHQSLSLDRMLNPLIDQYLYYLSRTN-TPSGTTTQSRQLQFSQAGASDIRDQSRNWLPGP
 hu. 35-B 413 YTFEDVPFHSSYAHQSLSLGRMLNPLIDQYLYYLSRTN-TPSGTTTQSRQLQFSQAGASDIRDQSRNWLPGP
 hu. 58-B 413 YTFEDVPFHSSYAHQSLSLDRMLNPLIDQYLYYLSRTN-TPSGTTTQSRQLQFSQAGASDIRDQSRNWLPGP
 hu. 28-B 413 YTFEDVPFHSSYAHQSLSLDRMLNPLIDQYLYYLSRTN-TPSGTTTQSRQLQFSQAGASDIRDQSRNWLPGP
 hu. 51-B 413 YTFEDVPFHSGYAHQSLSLDRMLNPLIDQYLYYLSRTN-TPSGTTTQSRQLQFSQAGASDIRDQSRNWLPGP
 hu. 19-B 413 YTFEDVPFHSSYAHQSLSLDRMLNPLIDQYLYYLSRTN-TPSGTTTMSRLQFSQAGASDIRDQSRNWLPGP
 hu. 49-B 413 YTFEDVPFHSSYAHQSLSLDRMLNPLIDQYLYYLSRTN-TPSGTTTQSRQLQFSQAGASDIRDQSRNWLPGP
 hu. 52-B 413 YTFEDVPFHSSYAHQSLSLDRMLNPLIDQYLYYLSRTN-TPSGTTTQSRQLQFSQAGASDIRDQSRNWLPGP
 hu. 13-B 413 YTFEDVPFHSSYAHQSLSLDRMLNPLIDQYLYYLSRTN-TPSGTTTQSRQLQFSQAGASDIRDQSRNWLPGP
 AAV2-B 413 YTFEDVPFHSSYAHQSLSLDRMLNPLIDQYLYYLSRTN-TPSGTTTQSRQLQFSQAGASDIRDQSRNWLPGP
 hu. 20-B 413 YTFEDVPFHSSYAHQSLSLDRMLNPLIDQYLYYLSRTN-TPSGTTTMSRLQFSQAGASDIRDQSRNWLPGP
 hu. 24-B 413 YTFEDVPFHSSYAHQSLSLDRMLNPLIDQYLYYLSRTN-TPSGTTTMSRLQFSQAGASDIRDQSRNWLPGP
 hu. 64-B 413 YTFEDVPFHSSYAHQSLSLDRMLNPLVDQYLYYLSRTN-TPSGTTTQSRQLQFSQAGASDIRDQSRNWLPGP
 hu. 27-B 413 YTFEDVPFHSSYAHQSLSLDRMLNPLIDQYLYYLSRTN-TPSGTTTMSRLQFSQAGASDVDRDQSRNWLPGP
 hu. 21-B 413 YTFEDVPFHSSYAHQSLSLDRMLNPLIDQYLYYLSRTN-TPSGTTTMSRLQFSQAGASDIRDQSRNWLPGP
 hu. 22-B 413 YTFEDVPFHSSYAHQSLSLDRMLNPLIDQYLYYLSRTN-TPSGTTTMSRLQFSQAGASDIRDQSRNWLPGP
 hu. 23-B 413 YTFEDVPFHSSYAHQSLSLDRMLNPLIDQYLYYLSRTN-TPSGTTTMSRLQFSQAGASDIRDQSRNWLPGP
 hu. 7-C 413 YTFEDVPFHSSYAHQSLSLDRMLNPLIDQYLYYLNKTQ-SNSGTLQQSRLLFSQAGPTMSLSLQAKNWLPGP
 hu. 61-C 413 YTFEDVPFHSSYAHQSLSLDRMLNPLIDQYLYYLNKTQ-TNSGTLQQSRLLFSQAGPTMSLSLQAKNRLPGP
 rh. 56-C 413 YTFEDVPFHSSYAHQSLSLDRMLNPLIDQYLYYLNKTQ-SNSGTLQQSRLLFSQAGPTMSLSLQAKNWLPGP
 hu. 9-C 413 YTFEDVPFHSSYAHQSLSLDRMLNPLIDQYLYYLNRTQ-SNSGTLQQSRLLFSQAGPTMSLSLQAKNWLPGP
 hu. 54-C 413 YTFEDVPFHSSYAHQSGLDRMLNPLIDQYLYYLNRTQ-TASGT-QQSRLLFSQAGPTMSLSLQAKNWLPGP
 hu. 53-C 413 YTFEDVPFHSSYAHQSLSLDRMLNPLIDQYLYYLNRTQ-TASGT-QQSRLLFSQAGPTMSLSLQAKNWLPGP
 hu. 60-C 413 YTFEDVPFHSSYAHQSLSLDRMLNPLVDQYLYYLNKTQ-TNSGTLQQSRLLFSQAGPTMSLSLQAKNWLPGP
 hu. 55-C 413 YTFEDVPFHSSYAHQSLSLDRMLNPLIDQYLYYLNRTQ-TASGT-QQSRLLFSQAGPTMSLSLQAKNWLPGP

hu. 2-C 413 YTFEDVPFHSSYAHQSQSLDRMLNPLIDQYLYYLNKTQ-TNSGTLQQSRLLFSQAGPTNMSLQAKNWLPGP
hu. 1-C 413 YTFEDVPFHSSYAHQSQSLDRMLNPLIDQYLYYLNKTQ-TNSGTLQQSRLLFSQAGPTNMSLQAKNWLPGP
hu. 18-C 413 YTFEDVPFHSSYAHQSQSLDRMLNPLIDQYLYYLNKTQ-SNSGTLQQSRLLFSQAGPTNMSLQAKNWLPGP
hu. 3-C 414 YTFEDVPFHSSYAHQSQSLDRMLNPLIDQYLYYLNKTQ-TNSGTLQQSRLLFSQAGPTNMSLQAKNWLPGP
hu. 25-C 413 YTFEDVPFHSSYAHQSQSLDRMLNPLIDQYLYYLNKTQ-TNSGTLQQSRLLFSQAGPTNMSLQAKNWLPGP
hu. 15-C 413 YTFEDVPFHSSYAHQSQSLDRMLNPLIDQYLYYLNKTQ-SNSGTLQQSRLLFSQAGPTNMSLQAKNWLPGP
hu. 16-C 413 YTFEDVPFHSSYAHQSQSLDRMLNPLIDQYLYYLNKTQ-SNSGTLQQSRLLFSQAGPTNMSLQAKNWLPGP
hu. 11-C 413 YTFEDVPFHSSYAHQSQSLDRMLNPLIDQYLYYLNKTQ-SNSGTLQQSRLLFSQAGPTNMSLQAKNWLPGP
hu. 10-C 413 YTFEDVPFHSSYAHQSQSLDRMLNPLIDQYLYYLNKTQ-SNSGTLQQSRLLFSQAGPTNMSLQAKNWLPGP
hu. 4-C 413 YTFEDVPFHSSYAHQSQSLDRMLNPLIDQYLYYLNKTQ-TNSGTLQQSRLLFSQAGPTNMSLQAKNWLPGP
rh. 54-D 415 YTFEDVPFHSSYAHQSQSLDRMLNPLIDQYLYYLNKTQ-TNSGTLQQSRLLFSQAGPTNMSLQAKNWLPGP
rh. 48-D 415 YTFEDVPFHSSYAHQSQSLDRMLNPLIDQYLYYLNKTQ-TNSGTLQQSRLLFSQAGPTNMSLQAKNWLPGP
rh. 55-D 415 YTFEDVPFHSSYAHQSQSLDRMLNPLIDQYLYYLNKTQ-TNSGTLQQSRLLFSQAGPTNMSLQAKNWLPGP
rh. 62-D 415 YTFEDVPFHSSYAHQSQSLDRMLNPLIDQYLYYLNKTQ-TNSGTLQQSRLLFSQAGPTNMSLQAKNWLPGP
AAV7-D 415 YTFEDVPFHSSYAHQSQSLDRMLNPLIDQYLYYLNKTQ-TNSGTLQQSRLLFSQAGPTNMSLQAKNWLPGP
rh. 52-E 416 YTFEDVPFHSSYAHQSQSLDRMLNPLIDQYLYYLNKTQ-TNSGTLQQSRLLFSQAGPTNMSLQAKNWLPGP
rh. 51-E 416 YTFEDVPFHSSYAHQSQSLDRMLNPLIDQYLYYLNKTQ-TNSGTLQQSRLLFSQAGPTNMSLQAKNWLPGP
hu. 39-E 416 YTFEDVPFHSSYAHQSQSLDRMLNPLIDQYLYYLNKTQ-TNSGTLQQSRLLFSQAGPTNMSLQAKNWLPGP
rh. 53-E 416 YTFEDVPFHSSYAHQSQSLDRMLNPLIDQYLYYLNKTQ-TNSGTLQQSRLLFSQAGPTNMSLQAKNWLPGP
hu. 37-E 416 YTFEDVPFHSSYAHQSQSLDRMLNPLIDQYLYYLNKTQ-TNSGTLQQSRLLFSQAGPTNMSLQAKNWLPGP
rh. 43-E 415 YTFEDVPFHSSYAHQSQSLDRMLNPLIDQYLYYLNKTQ-TNSGTLQQSRLLFSQAGPTNMSLQAKNWLPGP
rh. 50-E 416 YTFEDVPFHSSYAHQSQSLDRMLNPLIDQYLYYLNKTQ-TNSGTLQQSRLLFSQAGPTNMSLQAKNWLPGP
rh. 49-E 416 YTFEDVPFHSSYAHQSQSLDRMLNPLIDQYLYYLNKTQ-TNSGTLQQSRLLFSQAGPTNMSLQAKNWLPGP
rh. 61-E 416 YTFEDVPFHSSYAHQSQSLDRMLNPLIDQYLYYLNKTQ-TNSGTLQQSRLLFSQAGPTNMSLQAKNWLPGP
hu. 41-E 416 YTFEDVPFHSSYAHQSQSLDRMLNPLIDQYLYYLNKTQ-TNSGTLQQSRLLFSQAGPTNMSLQAKNWLPGP
rh. 64-E 416 YTFEDVPFHSSYAHQSQSLDRMLNPLIDQYLYYLNKTQ-TNSGTLQQSRLLFSQAGPTNMSLQAKNWLPGP
hu. 42-E 416 YTFEDVPFHSSYAHQSQSLDRMLNPLIDQYLYYLNKTQ-TNSGTLQQSRLLFSQAGPTNMSLQAKNWLPGP
rh. 57-E 416 YTFEDVPFHSSYAHQSQSLDRMLNPLIDQYLYYLNKTQ-TNSGTLQQSRLLFSQAGPTNMSLQAKNWLPGP
hu. 40-E 416 YTFEDVPFHSSYAHQSQSLDRMLNPLIDQYLYYLNKTQ-TNSGTLQQSRLLFSQAGPTNMSLQAKNWLPGP
AAV8-E 416 YTFEDVPFHSSYAHQSQSLDRMLNPLIDQYLYYLNKTQ-TNSGTLQQSRLLFSQAGPTNMSLQAKNWLPGP

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rh. 58-E	416	YTFEDVPFHSSYAHQSQSLDRIMNPLIDQYLYYLSRTQS-TGGTAGTQQLLFSQAGPSNMSAQARNWLP	500	510	520	530	540	550	560
rh. 40-E	416	YTFEDVPFHSSYAHQSQSLDRIMNPLIDQYLYYLSRTQS-TGGTQGTQQLLFSQAGPANMSARAKNWLPGP						
hu. 67-E	416	YTFEDVPFHSSYAHQSQSLDRIMNPLIDQYLYYLSRTQS-TGGTQGTQQLLFSQAGPANMSAQAKNWLPGP							
hu. 17-E	416	YQFEDVPFHSSYAHQSQSLDRIMNPLIDQYLYYLSRTQS-TGGTAGTQQLLFSQAGPNMSAQAKNWLPGP							
hu. 6-E	416	YQFEDVPFHSSYAHQSQSLDRIMNPLIDQYLYYLSRTQS-TGGTAGTQQLLFSQAGPNMSAQAKNWLPGP							
hu. 66-E	416	YTFEDVPFHSSCAHSQSQSLDRIMNPLIDQYLYYLSRTRS-TGGTQGTQQLLFSQAGPANMSAQAKNWLPGP							
rh. 38-E	416	YTFEDVPFHSSYAHQSQSLDRIMNPLIDQYLYYLSRTQS-TGGTQGTQQLLFSQAGPANMSAQAKNWLPGP							
hu. 32-F	415	YEFENVPFHSSYAHQSQSLDRIMNPLIDQYLYYLSKTINGSG--QNQQTLLKFSVAGPSNMAVQGRNYIPGP							
AAV9/hu	415	YEFENVPFHSSYAHQSQSLDRIMNPLIDQYLYYLSKTINGSG--QNQQTLLKFSVAGPSNMAVQGRNYIPGP							
hu. 31-F	415	YEFENVPFHSSYAHQSQSLDRIMNPLIDQYLYYLSKTINGSG--QNQQTLLKFSVAGPSNMAVQGRNYIPGP							

AAV5	469	MGRTOGWNLGSGVN-----RASVSATNRMELEGASYQVPPQPNGMTNNLQGSNTYAIENTMIFNSQP						
AAV3-3	483	CYRQORLSKTANDN-----NNSNFPWTAASKYHLNGRDLSLVNPGPAMASHKDDDEEKFPPMHGNLIFGKEG							
AAV4-4	477	SIKQOGFSKTANQYKIPATGSDSLIKYETHSTLDGRWSALTGPPPMATAGPADSKFS-NSQLIFAGPKQ							
AAV1-A	483	CYRQORVSKTKTDN-----NNSNFTWTGASKYNLNGRESIINPGTAMASHKDDDEEKFPPMSGVMI FGKES							
hu. 46-A	483	CYRQORVSKTKTDN-----NNSNFTWTGASKYNLNGRESIINPGTAMASHKDDDEEKFPPMSGVMI FGKES							
hu. 48-A	483	CYRQORVSKTKTDN-----NNSNFTWTGASKYNLNGRESIINPGTAVASHKDDDEEKFPPMSGVMI FGKES							
hu. 44-A	483	CYRQORVSKTKTDN-----NNSNFTWTGASKYNLNGRESIINPGTAMASHKDDDEEKFPPMSGVMI FGKES							
hu. 43-A	484	CYRQORVSKTKTDN-----NNSNFTWTGASKYNLNGRESIINPGTAMASHKDDDEEKFPPMSGVMI FGKES							
AAV6-A	483	CYRQORVSKTKTDN-----NNSNFTWTGASKYNLNGRESIINPGTAMASHKDDDEEKFPPMSGVMI FGKES							
hu. 34-B	482	CYRQORVSKTSADN-----NNSNFTWTGASKYNLNGRESIINPGTAMASHKDDDEEKFPPMSGVLI FGKQG							
hu. 47-B	482	CYRQORVSKTSADN-----NNSNFTWTGASKYNLNGRESIINPGTAMASHKDDDEEKFPPMSGVLI FGKQG							
hu. 29-B	482	CYRQORVSKTSADN-----NNSNFTWTGASKYNLNGRESIINPGTAMASHKDDDEEKFPPMSGVLI FGKQG							
hu. 63-B	482	CYRQORVSKTSADN-----NNSNFTWTGASKYNLNGRESIINPGTAMASHKDDDEEKFPPMSGVLI FGKQD							
hu. 56-B	482	CYRQORVSKTAADN-----NNSNFTWTGASKYNLNGRESIINPGTAMASHKDDDEEKFPPMSGVLI FGKQG							
hu. 45-B	482	CYRQORVSKTSADN-----NNSNFTWTGASKYNLNGRESIINPGTAMASHKDDDEEKFPPMSGVLI FGKQG							
hu. 57-B	481	CYRQORVSKTAADN-----NNSNFTWTGASKYNLNGRESIINPGTAMASHKDDDEEKFPPMSGVLI FGKQG							
hu. 35-B	482	CYRQORVSKTSADN-----NNSNFTWTGASKYNLNGRESIINPGTAMASHKDDDEEKFPPMSGVLI FGKQG							

FIG. 24

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hu. 58-B 482 CYRQQRVSKTSADN-----NNSEYSWIGATKYHLNGRDSLVPNPGPAMASHKDDDEEKFPPQSGVLI FGKQG
 hu. 28-B 482 CYRQQRVSKTSADN-----NNSEYSWTGATKYHLNGRDSLVPNPGPAMASHKDDDEEKFPPQSGVLI FGKQG
 hu. 51-B 482 CYRQQRVSKTSADN-----NNSEYSWTGATKYHLNGRDSLVPNPGPAMASHKDDNEEKFPPQSGVLI FGKQG
 hu. 19-B 482 CYRQQRVSKTAADN-----NNSDYSWTGATKYHLNGRDSLVPNPGPAMASHKDDDEEKFPPQSGVLI FGKQD
 hu. 49-B 482 CYRQQRVSKTAADN-----NNSEYSWTGATKYHLNGRDSLVPNPGPAMASHKDDDEEKFPPQSGVLI FGKQG
 hu. 52-B 482 CYRQQRVSKTSADN-----NNSEYSWTGATKYHLNGRDSLVPNPGPAMASHKDDNEEKFPPQSGVLI FGKQG
 hu. 13-B 482 CYRQQRVSKTSADN-----NNSEYSWTGATKYHLNGRDSLVPNPGPAMASHKDDDEEKFPPQSGVLI FGKQG
 AAV2-B 482 CYRQQRVSKTSADN-----NNSEYSWTGATKYHLNGRDSLVPNPGPAMASHKDDDEEKFPPQSGVLI FGKQG
 hu. 20-B 482 CYRQQRVSKTAADN-----NNSDYSWTGATKYHLNGRDSLVPNPGPAMASHKDDDEEKFPPQSGVLI FGKQD
 hu. 24-B 482 CYRQQRVSKTAADN-----NNSDYSWTGATKYHLNGRDSLVPNPGPAMASHKDDDEEKFPPQSGVLI FGKQD
 hu. 64-B 482 CYRQQRVSKTSADN-----NNSEYSWTGATKYHLNGRDSLVPNPGPAMASHKDDDEEKFPPQSGVLI FGKQD
 hu. 27-B 482 CYRQQRVSKTAADN-----NNSDYSWTGATKYHLNGRDSLVPNPGPAMASHKDDDEEKFPPQSGVLI FGKQD
 hu. 21-B 482 CYRQQRVSKTAADN-----NNSDYSWTGATKYHLNGRDSLVPNPGPAMASHKDDDEEKFPPQSGVLI FGKQD
 hu. 22-B 482 CYRQQRVSKTAADN-----NNSDYSWTGATKYHLNGRDSLVPNPGPAMASHKDDDEEKFPPQSGVLI FGKQD
 hu. 23-B 482 CYRQQRVSKTAADN-----NNSDYSWTGATKYHLNGRDSLVPNPGPAMASHKDDDEEKFPPQSGVLI FGKQD
 hu. 7-C 482 CYRQQRLSKQANDN-----NNSNFPWTAATKYHLNGRDSLVPNPGPAMASHKDDDEEKFPPMHGTLI FGKQG
 hu. 61-C 482 CYRQQRLSKQANDN-----NNSNFPWTAATKYHLNGRDSLVPNPGPAMASHKDDDEEKFPPMHGTLI FGKQG
 rh. 56-C 482 CYRQQRLSKQANDN-----NNSNFPWTAATKYHLNGRDSLVPNPGPAMASHKDDDEEKFPPMHGTLI FGKQG
 hu. 9-C 482 CYRQQRLSKQANDN-----NNSNFPWTAATKYHLNGRDSLVPNPGPAMASHKDDDEEKFPPMHGTLI FGKQG
 hu. 54-C 481 CYRQQRLSKQANDN-----NNSNFPWTAATKYHLNGRDSLVPNPGPAMASHKDDDEEKFPPMHGTLI FGKEG
 hu. 53-C 481 CYRQQRLSKQANDN-----NNSNFPWTAATKYHLNGRDSLVPNPGPAMASHKDDDEEKFPPMHGTLI FGKEG
 hu. 60-C 482 CYRQQRLSKQANDN-----NNSNFPWTAATKYHLNGRDSLVPNPGPAMASHKDDDEEKFPPMHGTLI FGKQG
 hu. 55-C 481 CYRQQRLSKQANDN-----NNSNFPWTAATKYHLNGRDSLVPNPGPAMASHKDDDEEKFPPMHGTLI FGKEG
 hu. 2-C 482 CYRQQRLSKQANDN-----NNSNFPWTAATKYHLNGRDSLVPNPGPAMASHKDDDEEKFPPMHGTLI FGKQG
 hu. 1-C 482 CYRQQRLSKQANDN-----NNSNFPWTAATKYHLNGRDSLVPNPGPAMASHKDDDEEKFPPMHGTLI FGKQG
 hu. 18-C 482 CYRQQRLSKQANDN-----NNSNFPWTAATKYHLNGRDSLVPNPGPAMASHKDDDEEKFPPMHGTLI FGKQG
 hu. 3-C 483 CYRQQRLSKQANDN-----NNSNFPWTAATKYHLNGRDSLVPNPGPAMASHKDDDEEKFPPMHGTLI FGKQG
 hu. 25-C 482 CYRQQRLSKQANDN-----NNSNFPWTAATKYHLNGRDSLVPNPGPAMASHKDDDEEKFPPMHGTLI FGKQG
 hu. 15-C 482 CYRQQRLSKQANDN-----NNSNFPWTAATKYHLNGRDSLVPNPGPAMASHKDDDEEKFPPMHGTLI FGKQG
 hu. 16-C 482 CYRQQRLSKQANDN-----NNSNFPWTAATKYHLNGRDSLVPNPGPAMASHKDDDEEKFPPMHGTLI FGKQG

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hu.11-C 482 CYRQRLSKQANDN-----NNSNFPWTAATKYRLNGRDSLVPNGPAMASHKDDDEKFFPMHGTLI FGKQG
 hu.10-C 482 CYRQRLSKQANDN-----NNSNFPWTAATKYHLNGRDSLVPNGPAMASHKDDDEKFFPMHGTLI FGKQG
 hu.4-C 482 CYRQRLSKQANDN-----NNSNFPWTAATKYHLNGRDSLVPNGPAMASHKDDDEKFFPMHGTLI FGKQG
 rh.54-D 485 CFRQQRVSKTLDQN-----NNSNFAWTGATKYHLNGRNSLVPNGVAMATHKDDDEDRFFPSSGVLI FGKTG
 rh.48-D 485 CFRQQRVSKTLDQN-----NNSNFAWTGATKYHLNGRNSLVPNGVAMATHKDDDEERFFPSSGVLI FGKTG
 rh.55-D 485 CFRQRRVSKTLDQN-----NNSNFAWTGATKYHLNGRNSLVPNGVAMATHKDDDEERFFPSSGVLI FGKTG
 rh.62-D 485 CFRQQRVSKTLDQN-----NNSNFAWTGATKYHLNGRNSLVPNGVAMATHKDDDEERFFPSSGVLI FGKTG
 AAV7-D 485 CFRQQRVSKTLDQN-----NNSNFAWTGATKYHLNGRNSLVPNGVAMATHKDDDEDRFFPSSGVLI FGKTG
 rh.52-E 485 CYRQQRVSTTLSQN-----NNSNFAWTGATKYHLNGRDSLVPNGVAMATNKDDDEDRFFPSSGILMFGKQG
 rh.51-E 485 CYRQQRVSTTLSQN-----NNSNFAWTGATKYHLNGRDSLVPNGVAMATNKDDDEDRFFPSSGILMFGKQG
 hu.39-E 485 CYRQQRVSTTLSQN-----NNSNFAWTGATKYHLNGRDSLVPNGVAMATNKDDDEDRFFPSSGILMFGKQG
 rh.53-E 485 CYRQQRVSTTLSQN-----NNSNFAWTGATKYHLNGRDSLVPNGVAMATNKDDDEDRFFPSSGILMFGKQG
 hu.37-E 485 CYRQQRVSTTLSQN-----NNSNFAWTGATKYHLNGRDSLVPNGVAMATHKDDDEERFFPSSGVLMFGKQG
 rh.43-E 484 CYRQQRVSTTGSQN-----NNSNFAWTAGTKYHLNGRNSLANPGIAMATHKDDDEERFFVTG-SCFWQQN
 rh.50-E 485 CYRQQRVSTTLSQN-----NNSNFAWTGATKYHLNGRDSLVPNGVAMATNKDDDEDRFFPSSGILMFGKQG
 rh.49-E 485 CYRQQRVSTTLSQN-----NNSNFAWTGATKYHLNGRDSLVPNGVAMATNKDDDEDRFFPSSGILMFGKQG
 rh.61-E 485 CYRQQRVSTTLSQN-----NNSNFAWTGATKYHLNGRDSLVPNGVAMATNKDDDEDRFFPSSGILMFGKQG
 hu.41-E 485 CYRQQRVSTTLSQN-----NNSNFAWTGATKYHLNGRDSLVPNGVAMATHKDDDEERFFPSSGVLMFGKQG
 rh.64-E 485 CYRQQRVSTTLSQN-----NNSNFAWTGATKYHLNGRDSLVPNGVAMATNKDDDEDRFFPSSGILMFGKQG
 hu.42-E 485 CYRQQRVSTTLSQS-----NNSNFAWTGATKYHLNGRDSLVPNGVAMATHKDDDEERFFPSSGVLMFGKQG
 rh.57-E 485 CYRQQRVSTTLSQN-----NNSNFAWTGATKYHLNGRDSLVPNGVAMATNKDDDEDRFFPSSGILMFGKQG
 hu.40-E 485 CYRQQRVSTTLSQN-----NNSNFAWTGATKYHLNGRDSLVPNGVAMATHKDDDEERFFPSSGVLMFGKQG
 AAV8-E 485 CYRQQRVSTTGSQN-----NNSNFAWTAGTKYHLNGRNSLANPGIAMATHKDDDEERFFPSNGILIFGKQN
 rh.58-E 485 CYRQQRVSTTLSQN-----NNSNFAWTGATKYHLNGRDSLVPNGVAMATNKDDDEDRFFPSSGILMFGKQG
 rh.40-E 485 CYRQQRVSTTLSQN-----NNSNFAWTGATKYHLNGRDSLVPNGVAMATHKDDDEERFFPSSGVLMFGKQG
 hu.67-E 485 CYRQQRVSTTLSQN-----NNSNFAWTGATKYHLNGRDSLVPNGVAMATHKDDDEERFFPSSGVLMFGKQG
 hu.17-E 485 CYRQQRVSTTLSQN-----NNSNFAWTGATKYHLNGRDSLVPNGVAMATHKDDDEERFFPSSGVLMFGKQG
 hu.6-E 485 CYRQQRVSTTLSQN-----NNSNFAWTGATKYHLNGRDSLVPNGVAMATHKDDDEERFFPSSGVLMFGKQG
 hu.66-E 485 CYRQQRVSTTLSQN-----NNSNFAWTGATKYHLNGRDSLVPNGVAMATHKDDDEERFFPSSGVLMFGKQG
 rh.38-E 485 CYRQQRVSTTLSQN-----NNSNFAWTGATKYHLNGRDSLVPNGVAMATHKDDDEERFFPSSGVLMFGKQG

FIG. 2V

hu.32-F	483	SYRQQRVSTTVTON-----NNSEFAWP	GASSWALNGRNSLMNPGPAMASHKEGEDRFFPLSGSLIFGKQG	570	580	590	600	610	620	630
AAV9/hu	483	SYRQQRVSTTVTON-----NNSEFAWP	GASSWALNGRNSLMNPGPAMASHKEGEDRFFPLSGSLIFGKQG							
hu.31-F	483	SYRQQRVSTTVTON-----NNSEFAWP	GASSWALNGRNSLMNPGPAMASHKEGEDRFFPLSGSLIFGKQG							
									
AAV5	534	ANPGTTATYLEGNMLITSESETQPVNRVAYNVGGQMATNNQSSSTTAPATGTYNLQEI	VPGSVWMERDVYL							
AAV3-3	548	T--TASNAELD-NVMITDEEEI	RTTNPVATEQYGTVANNLQSSNTAPTGTGNHQA							
AAV4-4	546	N--GNTATVPG-TLIFTSEEE	LAATNATDTDMGNLPGGDQSSNSLPTVDRLTALGAVPGMVWQNRDIYY							
AAV1-A	548	A--GASNTALD-NVMITDEEEI	KATNPVATERFGTVAVNFQSSSTD							
hu.46-A	548	A--GASNTALD-NVMITDEEEI	KATNPVATERFGTVAVNFQSSSTD							
hu.48-A	548	A--GASNTALD-NVMITDEEEI	KATNPVATERFGTVAVNFQSSSTD							
hu.44-A	548	A--GASNTALD-NVMITDEEEI	KATNPVATERFGTVAVNFQSSSTD							
hu.43-A	549	A--GASNTALD-NVMITDEEEI	KATNPVATERFGTVAVNFQSSSTD							
AAV6-A	548	A--GASNTALD-NVMITDEEEI	KATNPVATERFGTVAVNLQSSSTD							
hu.34-B	547	S--EKTNV	VDIE-KVMITDEEEIRTTNPVATEQYGSVSTNLQRGNRQAATADVNTQGVLP							
hu.47-B	547	S--EKTNV	VDIE-KVMITDEEEIRTTNPVATEQYGSVSTNLQRGNRQAATADVNTQGVLP							
hu.29-B	547	P--EKTNV	VDIE-KVMITDEEEIRTTNPVATEQYGSVSTNLQSGNTQAATADVNTQGVLP							
hu.63-B	547	S--GKTNV	VDIE-KVMITDEEEIRTTNPVATEQYGSVSTNLQSGNTQAATSDVNTQGVLP							
hu.56-B	547	S--EKTNV	VDIE-KVMITDEEEIRTTNPVATEQYGSVSTNLQSGNTQAATSDVNTQGVLP							
hu.45-B	547	S--EKTNV	VDIE-KVMITDEEEIRTTNPVATEQYGSVSTNLQRGNRQAATADVNTQGVLP							
hu.57-B	546	S--EKTNV	VDIE-KVMITDEEEIRTTNPVATEQYGSVSTNLQSGNTRAATSDVNTQGVLP							
hu.35-B	547	S--EKTNV	VDIE-KVMITDEEEIRTTNPVATEQYGSVSTNLQRGNRQAATADVNTQGVLP							
hu.58-B	547	S--EKTNV	VDIE-KVMITDEEEIRTTNPVATEQYGSVSTNLQSGNTQAATADVNTQGVLP							
hu.28-B	547	S--EKTNV	VDIE-KVMITDEEEIRTTNPVATEQYGSVSTNLQSGNTQAATADVNTQGVLP							
hu.51-B	547	S--EKTNV	VDIE-KVMITDEEEIRTTNPVATEQYGSVSTNLQRGNRQAATADVNTQGVLP							
hu.19-B	547	S--GKTNV	VDIE-KVMITDEEEIRTTNPVATEQYGSVSTNLQSGNTQAATSDVNTQGVLP							
hu.49-B	547	S--EKTNV	VDIE-KVMITDEEEIRTTNPVATEQYGSVSTNLQSGNTQAATADVNTQGVLP							
hu.52-B	547	S--EKTNV	VDIE-KVMITDEEEIRTTNPVATEQYGSVSTNLQRGNRQAATADVNTQGVLP							
hu.13-B	547	S--EKTNV	VDIE-KVMITDEEEIRTTNPVATEQYGSVSTNLQGGNTQAATADVNTQGVLP							

FIG. 2W

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AAV2-B 547 S--EKTNVVDIE-KVMITDEEEIRTTNPVATEQYGSVSTNLQRGNRQAATAADVNTQGVLPGMVWQDRDVYL
 hu.20-B 547 S--GKTNVVDIE-KVMITDEEEIRTTNPVATEQYGSVSTNLQSGNTQAATSDVNTQGVLPGMVWQDRDVYL
 hu.24-B 547 S--GKTNVVDIE-KVMITDEEEIRTTNPVATEQYGSVSTNLQSGNTQAATSDVNTQGVLPGMVWQDRDVYL
 hu.64-B 547 S--GKTNVVDIE-KVMITDEEEIRTTNPVATEQYGSVSTNLQSGNTQAATSDVNTQGVLPGMVWQDRDVYL
 hu.27-B 547 S--GKTNVVDIE-KVMITDEEEIRTTNPVATEQYGSVSTNLQSGNTQAATSDVNTQGVLPGMVWQDRDVYL
 hu.21-B 547 S--GKTNVVDIE-KVMITDEEEIRTTNPVATEQYGSVSTNLQSGNTQAATSDVNTQGVLPGMVWQDRDVYL
 hu.22-B 547 S--GKTNVVDIE-KVMITDEEEIRTTNPVATEQYGSVSTNLQSGNTQAATSDVNTQGVLPGMVWQDRDVYL
 hu.23-B 547 S--GKTNVVDIE-KVMITDEEEIRTTNPVATEQYGSVSTNLQSGNTQAATSDVNTQGVLPGMVWQDRDVYL
 hu.7-C 547 T--NANDADLD-NVMITDEEEIRTTNPVATEQYGYVSNNLQNSNTGPTTGTVNHQGALPGMVWQDRDVYL
 hu.61-C 547 T--NANDADLE-NVMITDEEEIRTTNPVATEQYGTVSNNLQNSNTGPTTGTVNHQGALPGMVWQDRDVYL
 rh.56-C 547 T--NANDADLD-NVMITDEEEIRTTNPVATEQYGYVSNNLQNSNTGPTTGTVNHQGALPGMVWQDRDVYL
 hu.9-C 547 T--NANDADLE-HVMITDEEEIRTTNPVATEQYGNVSNNLQNSNTGPTTENNVNHQGALPGMVWQDRDVYL
 hu.54-C 546 T--NATNAELE-NVMITDEEEIRTTNPVATEQYGYVSNNLQNSNTAASTETVNHQGALPGMVWQDRDVYL
 hu.53-C 546 T--NATNAELE-NVMITDEEEIRTTNPVATEQYGYVSNNLQNSNTAASTETVNHQGALPGMVWQDRDVYL
 hu.60-C 547 T--NANDADLE-NVMITDEEEIRTTNPVATEQYGTVSNNLQNSNTGPTTGTVNHQGALPGMVWQDRDVYL
 hu.55-C 546 T--NATNAELE-NVMITDEEEIRTTNPVATEQYGYVSNNLQNSNTAASTETVNHQGALPGMVWQDRDVYL
 hu.2-C 547 T--NANDADLE-NVMITDEEEIRATNPVATEQYGTVSNNLQNSNTGPTTGTVNRQGALPGMVWQDRDVYL
 hu.1-C 547 T--NANDADLE-NVMITDEEEIRATNPVATEQYGTVSNNLQNSNTGPTTGTVNHQGALPGMVWQDRDVYL
 hu.18-C 547 T--NANDADLD-NVMITDEEEIRTTNPVATEQYGYVSNNLQNSNTGPTTGTVNHQGALPGMVWQDRDVYL
 hu.3-C 548 T--NANDADLE-NVMITDEEEIRPTNPVATEQYGTVSNNLQNSNTGPTTGTVNHQGALPGMVWQDRDVYL
 hu.25-C 547 T--NANDADLE-NVMITDEEEIRTTNPVATEQYGTVSNNLQNSNTGPTTGTVNHQGALPGMVWQDRDVYL
 hu.15-C 547 T--NANDADLD-NVMITDEEEIRTTNPVATEQYGYVSNNLQNSNTGPTTGTVNHQGALPGMVWQDRDVYL
 hu.16-C 547 T--NANDADLD-NVMITDEEEIRTTNPVATEQYGYVSNNLQNSNTGPTTGTVNHQGALPGMVWQDRDVYL
 hu.11-C 547 T--NANDADLE-HVMITDEEEIRTTNPVATEQYGNVSNNLQNSNTGPTTENNVNHQGALPGMVWQDRDVYL
 hu.10-C 547 T--NANDADLE-HVMITDEEEIRTTNPVATEQYGNVSNNLQNSNTGPTTENNVNHQGALPGMVWQDRDVYL
 hu.4-C 547 T--NANDADLE-NVMITDEEEIRATNPVATEQYGTVSNNLQNSNTGPTTGTVNHQGALPGMVWQDRDVYL
 rh.54-D 550 A--TN-KTTLE-NVLMTNEEEIRPTNPVATEEYGISSNLQAANTAAQTQVVNNQGALPGMVWQNRDVYL
 rh.48-D 550 A--AN-KTTLE-NVLMTNEEEIRPTNPVATEEYGTSSNLQAANTAAQTQVVNNQGALPGMVWQNRDVYL
 rh.55-D 550 A--AN-KTTLE-NVLMTNEEEIRPTNPVATEEYGTSSNLQAANTAAQTQVVNNQGALPGMVWQNRDVYL
 rh.62-D 550 A--AN-KTTLE-NVLMTNEEEIRPTNPVATEEYGTSSNLQAANTAAQTQVVNNQGALPGMVWQNRDVYL

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AAV3-3 615 QGPIWAKIPHTDGHFHPSPMLMGFGGLKHPPPPQIMIKNTVPANPPTTFSPAKFASFITQYSTGQVSVEIE
AAV4-4 613 QGPIWAKIPHTDGHFHPSPLIIGFGGLKHPPPPQIFIKNTVPANPATTFSSSTPVNSFITQYSTGQVSQID
AAV1-A 615 QGPIWAKIPHTDGHFHPSPMLMGFGGLKNPPPPQILIKNTVPANPPAEFSATKFAFITQYSTGQVSVEIE
hu.46-A 615 QGPIWAKIPHTDGHFHPSPMLMGFGGLKNPPPPQILIKNTVPANPPAEFSATKFAFITQYSAGQVSVEIE
hu.48-A 615 QGPIWAKIPHTDGHFHPSPMLMGFGGLKNPPPPQILIKNTVPANPPAEFSATKFAFITQYSTGQVSVEIE
hu.44-A 615 QGPIWAKIPHTDGHFHPSPMLMGFGGLKNPPPPQILIKNTVPANPPAEFSATKFAFITQYSTGQVSVEIE
hu.43-A 616 QGPIWAKIPHTDGHFHPSPMLMGFGGLKNPPPPQILIKNTVPANPPAEFSATKFAFITQYSTGQVSVEIE
AAV6-A 615 QGPIWAKIPHTDGHFHPSPMLMGFGGLKHPPPPQILIKNTVPANPPAEFSATKFAFITQYSTGQVSVEIE
hu.34-B 614 QGPIWAKIPHTDGHFHPSPMLMGFGGLKHPPPPQILIKNTVPANPSTTFSAKFAFITQYSTGQVSVEIE
hu.47-B 614 QGPIWAKIPHTDGHFHPSPMLMGFGGLKHPPPPQILIKNTVPANPSTTFSAKFAFITQYSTGQVSVEIE
hu.29-B 614 QGPIWAKIPHTDGHFHPSPMLMGFGGLKHPPPPQILIKNTVPANPSTTFSAKFAFITQYSTGQVSVEIE
hu.63-B 614 QGPIWAKIPHTDGHFHPSPMLMGFGGLKHPPPPQILIKNTVPANPSTTFSAKFAFITQYSTGQVSVEIE
hu.56-B 614 QGPIWAKIPHTDGHFHPSPMLMGFGGLKHPPPPQILIKNTVPANPSTTFSAKFAFITQYSTGQVSVEIE
hu.45-B 614 QGPIWAKIPHTDGHFHPSPMLMGFGGLKHPPPPQILIKNTVPANPSTTFSAKFAFITQYSTGQVSVEIE
hu.57-B 613 QGPIWAKIPHTDGHFHPSPMLMGFGGLKHPPPPQILIKNTVPANPSTTFSAKFAFITQYSTGQVSVEIE
hu.35-B 614 QGPIWAKIPHTDGHFHPSPMLMGFGGLKHPPPPQILIKNTVPANPSTTFSAKFAFITQYSTGQVSVEIE
hu.58-B 614 QGPIWAKIPHTDGHFHPSPMLMGFGGLKHPPPPQILIKNTVPANPSTTFSAKFAFITQYSTGRVSVEIE
hu.28-B 614 QGPIWAKIPHTDGHFHPSPMLMGFGGLKHPPPPQILIKNTVPANPSTTFSAKFAFITQYSTGQVSVEIE
hu.51-B 614 QGPIWAKIPHTDGHFHPSPMLMGFGGLKHPPPPQILIKNTVPANPSTTFSAKFAFITQYSTGQVSVEIE
hu.19-B 614 QGPIWAKIPHTDGHFHPSPMLMGFGGLKHPPPPQILIKNTVPANPSTTFSAKFAFITQYSTGQVSVEIE
hu.49-B 614 QGPIWAKIPHTDGHFHPSPMLMGFGGLKHPPPPQILIKNTVPANPSTTFSAKFAFITQYSTGQVSVEIE
hu.52-B 614 QGPIWAKIPHTDGHFHPSPMLMGFGGPKHPPPPQILIKNTVPANPSTTFSAKFAFITQYSTGQVSVEIE
hu.13-B 614 QGPIWAKIPHTDGHFHPSPMLMGFGGLKHPPPPQILIKNTVPANPSTTFSAKFAFITQYSTGQVSVEIE
AAV2-B 614 QGPIWAKIPHTDGHFHPSPMLMGFGGLKHPPPPQILIKNTVPANPSTTFSAKFAFITQYSTGQVSVEIE
hu.20-B 614 QGPIWAKIPHTDGHFHPSPMLMGFGGLKHPPPPQILIKNTVPANPSTTFSAKFAFITQYSTGQVSVEIE
hu.24-B 614 QGPIWAKIPHTDGHFHPSPMLMGFGGLKHPPPPQILIKNTVPANPSTTFSAKFAFITQYSTGQVSVEIE
hu.64-B 614 QGPIWAKIPHTDGHFHPSPMLMGFGGLKHPPPPQILIKNTVPANPSTTFSAKFAFITQYSTGQVSVEIE
hu.27-B 614 QGPIWAKIPHTDGHFHPSPMLMGFGGLKHPPPPQILIKNTVPANPSTTFSAKFAFITQYSTGQVSVEIE
hu.21-B 614 QGPIWAKIPHTDGHFHPSPMLMGFGGLKHPPPPQILIKNTVPANPSTTFSAKFAFITQYSTGQVSVEIE
hu.22-B 614 QGPIWAKIPHTDGHFHPSPMLMGFGGLKHPPPPQILIKNTVPANPSTTFSAKFAFITQYSTGQVSVEIE

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hu.23-B 614 RGPWAKIPHTDGHFHPSPMLMGFGGLKHPPPPQILIKNTPVPANPSTTSSAAKFASFITQYSTGQVSVEIE
 hu.7-C 614 QGPWAKIPHTDGHFHPSPMLMGFGGLKHPPPPQIMIKNTPVPANPPTNFSSAKFASFITQYSTGQVSVEIE
 hu.61-C 614 QGPWAKIPHTDGHFHPSPVLGGFGLKHPPPPQIMIKNTPVPANPPTNFSSAKFASFITQYSTGQVSVEIE
 rh.56-C 614 QGPWAKIPHTDGHFHPSPMLMGFGGLKHPPPPQIMIKNTPVPANPPTNFSSAKFASFITQYSTGQVSVEIE
 hu.9-C 614 QGPWAKIPHTDGHFHPSPMLMGFGGLKHPPPPQIMIKNTPVPANPPTNFSSAKFASFITQYSTGQVSVEIE
 hu.54-C 613 RGPWAKIPHADGHFHPSPMLMGFGGLKHPPPPQIMIKNTPVPANPPTNFSSAKFASFITQYSTGQVSVEIE
 hu.53-C 613 QGPWAKIPHTDGHFHPSPMLMGFGGLKHPPPPQIMIKNTPVPANPPTNFSSAKFASFITQYSTGQVSVEIE
 hu.60-C 614 QGPWAKIPHTDGHFHPSPMLMGFGGLKHPPPPQIMIKNTPVPANPPTNFSSAKFASFITQYSTGQVSVEIE
 hu.55-C 613 QGPWAKIPHTDGHFHPSPMLMGFGGLKHPPPPQIMIKNTPVPANPPTNFSSAKFASFITQYSTGQVSVEIE
 hu.2-C 614 QGPWAKIPHTDGHFHPSPMLMGFGGLKHPPPPQIMIKNTPVPANPPTNFSSAKFASFITQYSTGQVSVEIE
 hu.1-C 614 QGPWAKIPHTDGHFHPSPLTGGFGLKHPPPPQIMIKNTPVPANPPTNFSSAKFASFITQYSTGQVSVEIE
 hu.18-C 614 QGPWAKIPHTDGHFHPSPMLMGFGGLKHPPPPQIMIKNTPVPANPPTNFSSAKFASFITQYSTGQVSVEIE
 hu.3-C 615 QGPWAKIPHTDGHFHPSPMLMGFGGLKHPPPPQIMIKSTVPANPPTNFSSAKFASFITQYSTGQVSVEIE
 hu.25-C 614 QGPWAKIPHTDGHFHPSPMLMGFGGLKHPPPPQIMIKNTPVPANPPTNFSSAKFASFITQYSTGQVSVEIE
 hu.15-C 614 QGPWAKIPHTDGHFHPSPMLMGFGGLKHPPPPQIMIKNTPVPANPPTNFSSAKFASFITQYSTGQVSVEIE
 hu.16-C 614 QGPWAKIPHTDGHFHPSPMLMGFGGLKHPPPPQIMIKNTPVPANPPTNFSSAKFASFITQYSTGQVSVEIE
 hu.11-C 614 QGPWAKIPHTDGHFHPSPMLMGFGGLKHPPPPQIMIKNTPVPANPPTNFSSAKFASFITQYSTGQVSVEIE
 hu.10-C 614 QGPWAKIPHTDGHFHPSPMLMGFGGLKHPPPPQIMIKNTPVPANPPTNYSSAKFASFITQYSTGQVSVEIE
 hu.4-C 614 QGPWAKIPHTDGHFHPSPMLMGFGGLKHPPPPQIMIKNTPVPANPPTNFSSAKFASFITQYSTGQVSVEIE
 rh.54-D 616 QGPWAKIPHTDGNFHPSPMLMGFGGLKHPPPPQILIKNTPVPANPPEVFTPAKFASFITQYSTGQVSVEIE
 rh.48-D 616 QGPWAKIPHTDGNFHPSPMLMGFGGLKHPPPPQILIKNTPVPANPPEVFTPAKFASFITQYSTGQVSVEIE
 rh.55-D 616 QGPWAKIPHTDGNFHPSPMLMGFGGLKHPPPPQILIKNTPVPANPPEVFTPAKFASFITQYSTGQVSVEIE
 rh.62-D 616 QGPWAKIPHTDGNFHPSPMLMGFGGLKHPPPPQILIKNTPVPANPPEVFTPAKFASFITQYSTGQVSVEIE
 AAV7-D 616 QGPWAKIPHTDGNFHPSPMLMGFGGLKHPPPPQILIKNTPVPANPPEVFTPAKFASFITQYSTGQVSVEIE
 rh.52-E 617 QGPWAKIPHTDGNFHPSPMLMGFGGLKHPPPPQILIKNTPVPADPPTAFNQAKLNSFITQYSTGQVSVEIE
 rh.51-E 617 QGPWAKIPHTDGNFHPSPMLMGFGGLKHPPPPQILIKNTPVPADPPTAFNQAKLNSFITQYSTGQVSVEIE
 hu.39-E 617 QGPWAKIPHTDGNFHPSPMLMGFGGLKHPPPPQILIKNTPVPADPPTAFNQAKLNSFIAQYSTGQVSVEIE
 rh.53-E 617 QGPWAKIPHTDGNFHPSPMLMGFGGLKHPPPPQILIKNTPVPADPPTAFNQAKLNSFITQYSTGQVSVEIE
 hu.37-E 617 QGPWAKIPHTDGNFHPSPMLMGFGGLKHPPPPQILIKNTPVPADPPTTFSQAKLASFITQYSTGQVSVEIE
 rh.43-E 615 QGPWAKIPHTDGNFHPSPMLMGFGGLKHPPPPQILIKNTPVPADPPTTFSQAKLASFITQYSTGQVSVEIE

FIG. 2AA

rh. 50-E	617	QGPIWAKIPH	T	DG	NF	HPS	P	L	M	G	F	G	L	K	H	P	P	P	Q	I	L	I	K	N	T	P	V	P	A	D	P	P	T	A	F	N	Q	A	K	L	N	S	F	I	T	O	Y	S	T	G	Q	V	S	E	I	E
rh. 49-E	617	QGPIWAKIPH	T	DG	NF	HPS	P	L	M	G	F	G	L	K	H	P	P	P	Q	I	L	I	K	N	T	P	V	P	A	D	P	P	T	A	F	N	Q	A	K	L	N	S	F	I	T	O	Y	G	T	G	Q	V	S	E	I	E
rh. 61-E	617	QGPIWAKIPH	T	DG	NF	HPS	P	L	M	G	F	G	L	K	H	P	P	P	Q	I	L	I	K	N	T	P	V	P	A	D	P	P	T	A	F	N	Q	A	K	L	N	S	F	I	T	O	Y	S	T	G	Q	V	S	E	I	E
hu. 41-E	617	QGPIWAKIPH	T	DG	NF	HPS	P	L	M	G	F	G	L	K	H	P	P	P	Q	I	L	I	K	N	T	P	V	P	A	D	P	P	T	T	F	S	Q	A	K	L	A	S	F	I	T	O	Y	S	T	G	Q	V	S	E	I	E
rh. 64-E	617	QGPIWAKIPH	T	DG	NF	HPS	P	L	M	G	F	G	L	K	H	P	P	P	Q	I	L	I	K	N	T	P	V	P	A	D	P	P	T	A	F	N	Q	A	K	L	N	S	F	I	T	O	Y	S	T	G	Q	V	S	E	I	E
hu. 42-E	617	QGPIWAKIPH	T	DG	NF	HPS	P	L	M	G	F	G	L	K	H	P	P	P	Q	I	L	I	K	N	T	P	V	P	A	D	P	P	T	T	F	S	Q	A	K	L	A	S	F	I	T	O	Y	S	T	G	Q	V	S	E	I	E
rh. 57-E	617	QGPIWAKIPH	T	DG	NF	HPS	P	L	M	G	F	G	L	K	H	P	P	P	Q	I	L	I	K	N	T	P	V	P	A	D	P	P	T	A	F	N	Q	A	K	L	N	S	F	I	T	O	Y	S	T	G	Q	V	S	E	I	E
hu. 40-E	617	QGPIWAKIPH	T	DG	NF	HPS	P	L	M	G	F	G	L	K	H	P	P	P	Q	I	L	I	K	N	T	P	V	P	A	D	P	P	T	T	F	S	Q	A	K	L	A	S	F	I	T	O	Y	S	T	G	Q	V	S	E	I	E
AAV8-E	617	QGPIWAKIPH	T	DG	NF	HPS	P	L	M	G	F	G	L	K	H	P	P	P	Q	I	L	I	K	N	T	P	V	P	A	D	P	P	T	T	F	N	Q	S	K	L	N	S	F	I	T	O	Y	S	T	G	Q	V	S	E	I	E
rh. 58-E	617	QGPIWAKIPH	T	DG	NF	HPS	P	L	M	G	F	G	L	K	H	P	P	P	Q	I	L	I	K	N	T	P	V	P	A	D	P	P	T	A	F	N	Q	A	K	L	N	S	F	I	T	O	Y	S	T	G	Q	V	S	E	I	E
rh. 40-E	617	QGPIWAKIPH	T	DG	NF	HPS	P	L	M	G	F	G	L	K	H	P	P	P	Q	I	L	I	K	N	T	P	V	P	A	D	P	P	T	T	F	S	Q	A	K	L	A	S	F	I	T	O	Y	S	T	G	Q	V	S	E	I	E
hu. 67-E	617	QGPIWAKIPH	T	DG	NF	HPS	P	L	M	G	F	G	L	K	H	P	P	P	Q	I	L	I	K	N	T	P	V	P	A	D	P	P	T	T	F	S	Q	A	K	L	A	S	F	I	T	O	Y	S	T	G	Q	V	S	E	I	E
hu. 17-E	617	QGPIWAKIPH	T	DG	NF	HPS	P	L	M	G	F	G	L	K	H	P	P	P	Q	I	L	I	K	N	T	P	V	P	A	D	P	P	T	T	F	S	Q	A	K	L	A	S	F	I	T	O	Y	S	T	G	Q	V	S	E	I	E
hu. 6-E	617	QGPIWAKIPH	T	DG	NF	HPS	P	L																																																

FIG. 2AB

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AAV6-A 685 WELQENSKRWNPEVQYTSNYAKSANVDFTVDDNNGLYTEPRPIGTRYLTRPL*
hu.34-B 684 WELQENSKRWNPEIQYTSNYNKSXNVDFTVDTNGVYSEPRPIGTRYLTRNL*
hu.47-B 684 WELQENSKRWNPEIQYTSNYNKSXNVDFTVDTNGVYSEPRPIGTRYLTRNL*
hu.29-B 684 WELQENSKRWNPEIQYTSNYNKSXNVDFTVDTNGVYSEPRPIGTRYLTRNL*
hu.63-B 684 WELQENSKRWNPEIQYTSNYNKSXNVDFTVDTNGVYSEPRPIGTRYLTRNL*
hu.56-B 684 WELQENSKRWNPEIQYTSNYNKSXNVDFTVDTNGVYSEPRPIGTRYLTRNL*
hu.45-B 684 WELQENSKRWNPEIQYTSNYNKSXNVDFTVDTNGVYSEPRPIGTRYLTRNL*
hu.57-B 683 WELQENSKRWNPEIQYTSNYNKSXNVDFTVDTNGVYSEPRPIGTRYLTRNL*
hu.35-B 684 WELQENSKRWNPEIQYTSNYNKSXNVDFTVDTNGVYSEPRPIGTRYLTRNL*
hu.58-B 684 WELQENSKRWNPEIQYTSNYNKSXNVDFTVDTNGVYSEPRPIGTRYLTRNL*
hu.28-B 684 WELQENSKRWNPEIQYTSNYNKSXNVDFTVDTNGVYSEPRPIGTRYLTRNL*
hu.51-B 684 WELQENSKRWNPEIQYTSNYNKSXNVDFTVDTNGVYSEPRPIGTRYLTRNL*
hu.19-B 684 WELQENSKRWNPEIQYTSNYNKSXNVDFTVDTNGVYSEPRPIGTRYLTRNL*
hu.49-B 684 WELQENSKRWNPEIQYTSNYNKSXNVDFTVDTNGVYSEPRPIGTRYLTRNL*
hu.52-B 684 WELQENSKRWNPEIQYTSNYNKSXNVDFTVDTNGVYSEPRPIGTRYLTRNL*
hu.13-B 684 WELQENSKRWNPEIQYTSNYNKSXNVDFTVDTNGVYSEPRPIGTRYLTRNL*
AAV2-B 684 WELQENSKRWNPEIQYTSNYNKSXNVDFTVDTNGVYSEPRPIGTRYLTRNL*
hu.20-B 684 WELQENSKRWNPEIQYTSNYNKSXNVDFTVDTNGVYSEPRPIGARYLTRNL*
hu.24-B 684 WELQENSKRWNPEIQYTSNYNKSXNVDFTVDTNGVYSEPRPIGTRYLTRNL*
hu.64-B 684 WELQENSKRWNPEIQYTSNYNKSXNVDFTVDTNGVYSEPRPIGTRYLTRNL*
hu.27-B 684 WELQENSKRWNPEIQYTSNYNKSXNVDFTVDTNGVYSEPRPIGTRYLTRNL*
hu.21-B 684 WELQENSKRWNPEIQYTSNYNKSXNVDFTVDTNGVYSEPRPIGTRYLTRNL*
hu.22-B 684 WELQENSKRWNPEIQYTSNYNKSXNVDFTVDTNGVYSEPRPIGTRYLTRNL*
hu.23-B 684 WELQENSKRWNPEIQYTSNYNKSXNVDFTVDTNGVYSEPRPIGTRYLTRNL*
hu.7-C 684 WELQENSKRWNPEIQYTSNYNKSXNVDFTVDTNGVYSEPRPIGTRYLTRNL*
hu.61-C 684 WELQENSKRWNPEIQYTSNYNKSXNVDFTVDTNGVYSEPRPIGTRYLTRNL*
rh.56-C 684 WELQENSKRWNPEIQYTSNYNKSXNVDFTVDTNGVYSEPRPIGTRYLTRNL*
hu.9-C 684 WELQENSKRWNPEIQYTSNYNKSXNVDFTVDTNGVYSEPCPIGTRYLTRNL*
hu.54-C 683 WELQENSKRWNPEIQYTSNYNKSXNVDFTVDTNGVYSEPRPIGTRYLTRNL*
hu.53-C 683 WELQENSKRWNPEIQYTSNYNKSXNVDFTVDTNGVYSEPRPIGTRYLTRNL*

FIG. 2AC

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hu. 60-C 684 WELQENSKRWNPEIQYTSNYNKSXNVDFTVDTNGVYSEPRPIGTRYLTRNL*
hu. 55-C 683 WELQENSKRWNPEIQYTSNYNKSXNVDFTVDTNGVYSEPRPIGTRYLTRNL*
hu. 2-C 684 WELQENSKRWNPEIQYTSNYNKSXNVDFTVDTNGVYSEPRPIGTRYLTRNL*
hu. 1-C 684 WELQENSKRWNPEIQYTSNYNKSXNVDFTVDTNGVYSEPRPIGTRYLTRNL*
hu. 18-C 684 WELQENSKRWNPEIQYTSNYNKSXNVDFTVDTNGVYSEPRPIGTRYLTRNL*
hu. 3-C 685 WELQENSKRWNPEIQYTSNYNKSXNVDFTVDTNGVYSEPRPIGTRYLTRNL*
hu. 25-C 684 WELQENSKRWNPEIQYTSNYNKSXNVDFTVDTNGVYSEPRPIGTRYLTRNL*
hu. 15-C 684 WELQEDSKRWNPEIQYTSNYNKSXNVDFTVDTNGVYSEPRPIGTRYLTRNL*
hu. 16-C 684 WELQENSKRWNPEIQYTSNYNKSXNVDFTVDTNGVYSEPRPIGTRYLTRNL*
hu. 11-C 684 WELQENSKRWNPEIQYTSNYNKSXNVDFTVDTNGVYSEPRPIGTRYLTRNL*
hu. 10-C 684 WELQENSKRWNPEIQYTSNYNKSXNVDFTVDTNGVYSEPRPIGTRYLTRNL*
hu. 4-C 684 WELQENSKRWNPEIQYTSNYNKSXNVDFTVDTNGVYSEPRPIGTRYLTRNL*
rh. 54-D 686 WELQENSKRWNPEIQYTSNFDKQGTGVDFAVDSQGVYSEPRPIGTRYLTRNL*
rh. 48-D 686 WELQENSKRWNPEIQYTSNFDKQGTGVDFAVDSQGVYSEPRPIGTRYLTRNL*
rh. 55-D 686 WELQENSKRWNPEIQYTSNFDKQGTGVDFAVDSQGVYSEPRPIGTRYLTRNL*
rh. 62-D 686 WELQENSKRWNPEIQYTSNFDKQGTGVDFAVDSQGVYSEPRPIGTRYLTRNL*
AAV7-D 686 WELQENSKRWNPEIQYTSNFEKQGTGVDFAVDSQGVYSEPRPIGTRYLTRNL*
rh. 52-E 687 WELQENSKRWNPEIQYTSNYKYKSTNVDFAVNTEGVYSEPRPIGTRYLTRNL*
rh. 51-E 687 WEPQENSKRWNPEIQYTSNYKYKSTNVDFAVNTEGVYSEPRPIGTRYLTRNL*
hu. 39-E 687 WELQENSKRWNPEIQYTSNYKYKSTNADFVAVNTEGVYSEPRPIGTRYLTRNL*
rh. 53-E 687 WELQENSKRWNPEIQYTSNYKYKSTNVDFAVNTEGVYSEPRPIGTRYLTRNL*
hu. 37-E 687 WELQENSKRWNPEIQYTSNYKYKSTNVDFAVNTEGVYSEPRPIGTRYLTRNL*
rh. 43-E 685 WELQENSKRWNPEIQYTSNYKYKSTSVDFAVNTEGVYSEPRPIGTRYLTRNL*
rh. 50-E 687 WELQENSKRWSPEIQYTSNYKYKSTNVDFAVNTEGVYSEPRPIGTRYLTRNL*
rh. 49-E 687 WELQENSKRWNPEIQYTSNYKYKSTNVDFAVNTEGVYSEPRPIGTRYLTRNL*
rh. 61-E 687 WELQENSKRWNPEIQYTSNYKYKSTNVDFAVNTEGVYSEPRPIGTRYLTRNL*
hu. 41-E 687 WELQENSKRWNPEIQYTSNYKYKSTNVDFAVNTEGVYSEPRPIGTRYLTRNL*
rh. 64-E 687 WELQENSKRRNPEIQYTSNYKYKSTNVDFAVNTEGVYSEPRPIGTRYLTRNL*
hu. 42-E 687 WELQENSKRWNPEIQYTSNYKYKSTNVDFAVNTEGVYSEPRPIGTRYLTRNL*
rh. 57-E 687 WELQENSKRWNPEIQYTSNYKYKSTNVDFAVNTEGVYSEPRPIGTRYLTRNL*

FIG. 2AD

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hu.40-E	687	WELQKNSKRWNPEIQYTSNYYKSTNVDFAVNTEGTYSEPRPIGTRYLTRNL*
AAV8-E	687	WELQKNSKRWNPEIQYTSNYYKSTVDFAVNTEGVYSEPRPIGTRYLTRNL*
rh.58-E	687	WELQKNSKCWNPEIQYTSNYYKSTNVDFAVNTEGVYSEPRPIGTRYLTRNL*
rh.40-E	687	WELQKNSKRWNPEIQYTSNYYKSTNVDFAVNSEGTYSYSEPRPIGTRYLTRNL*
hu.67-E	687	WELQKNSKRWNPEIQYTSNYYKSTNVDFAVNTEGTYSEPRPIGTRYLTRNL*
hu.17-E	687	WELQKNSKRWNPEIQYTSNYYKSTNVDFAVNTEGTYSEPRPIGTRYLTRNL*
hu.6-E	687	WELQKNSKRWNPEIQYTSNYYKSTNVDFAVNTEGTYSEPRPIGTRYLTRNL*
hu.66-E	687	WELQKNSKRWNPEIQYTSNYYKSTNVDFAVNTEGTYSEPRPIGTRYLTRNL*
rh.38-E	687	WELQKNSKRWNPEIQYTSNYYKSTNVDFAVNTEGTYSEPRPIGTRYLTRNL*
hu.32-F	685	WELQKNSKRWNPEIQYTSNYYKSNVDFAVNTEGVYSEPRPIGTRYLTRNL*
AAV9/hu	685	WELQKNSKRWNPEIQYTSNYYKSNVDFAVNTEGVYSEPRPIGTRYLTRNL*
hu.31-F	685	WELQKNSKRWNPEIQYTSNYYKSNVDFAVNTEGVYSEPRPIGTRYLTRNL*

FIG. 2AE

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	10	20	30	40	50	60	70
AAV5	1					
AAV3-3	1	ATGCTTTTGTGATCACCCCTCCAGATTGGTTGGAAGAA---					
AAV4-4	1	ATGGCTGCTGACGGTTATCTTCCAGATTGGCTCGAGGACAACCTTCTGAAGGCATTCGTGAGTGGTGGG					
AAV1-A	1	---ATGACTGACGGTTACCTTCCAGATTGGCTAGAGGACAACCTCTCTGAAGCGTTCGAGAGTGGTGGG					
hu.46-A	1	ATGGCTGCCGATGGTTATCTTCCAGATTGGCTCGAGGACAACCTCTCTGAGGGCATTCGCGAGTGGTGGG					
hu.48-A	1	ATGGCTGCCGACGGTTATCTTCCAGATTGGCTCGAGGACACTCTCTCTGAAGGAATAAGACAGTGGTGGG					
hu.44-A	1	ATGGCTGCCGATGGTTATCTTCCAGATTGGCTCGAGGACAACCTCTCTGAGGGCATTCGCGAGTGGTGGG					
hu.43-A	1	ATGGCTGCCGATGGTTATCTTCCAGATTGGCTCGAGGACACTCTCTCTGAAGGAATAAGACAGTGGTGGG					
AAV6-A	1	ATGGCTGCCGATGGTTATCTTCCAGATTGGCTCGAGGACAACCTCTCTGAGGGCATTCGCGAGTGGTGGG					
hu.34-B	1	ATGGCTGCCGATGGTTATCTTCCAGATTGGCTCGAGGACACTCTCTCTGAAGGAATAAGACAGCGGTGGG					
hu.47-B	1	ATGGCTGCCGATGGTTATCTTCCAGATTGGCTCGAGGACACTCTCTCTGAAGGAATAAGACAGTGGTGGG					
hu.29-B	1	ATGGCTGCCGATGGTTATCTTCCAGATTGGCTCGAGGACACTCTCTCTGAAGGAATAAGACAGTGGTGGG					
hu.63-B	1	ATGGCTGCCGATGGTTATCTTCCAGATTGGCTCGAGGACACTCTCTCTGAAGGAATAAGACAGTGGTGGG					
hu.56-B	1	ATGGCTGCCGATGGTTATCTTCCAGATTGGCTCGAGGACACTCTCTCTGAAGGAATAAGACAGTGGTGGG					
hu.45-B	1	ATGGCTGCCGATGGTTATCTTCCAGATTGGCTCGAGGACACTCTCTCTGAAGGAATAAGACAGTGGTGGG					
hu.57-B	1	ATGGCTGCCGATGGTTATCTTCCAGATTGGCTCGAGGACACTCTCTCTGAAGGAATAAGACAGTGGTGGG					
hu.35-B	1	ATGGCTGCCGATGGTTATCTTCCAGATTGGCTCGAGGACACTCTCTCTGAAGGAATAAGACAGCGGTGGG					
hu.58-B	1	ATGGCTGCCGATGGTTATCTTCCAGATTGGCTCGAGGACACTCTCTCTGAAGGAATAAGACAGTGGTGGG					
hu.28-B	1	ATGGCTGCCGATGGTTATCTTCCAGATTGGCTCGAGGACACTCTCTCTGAAGGAATAAGACAGTGGTGGG					
hu.51-B	1	ATGGCTGCCGATGGTTATCTTCCAGATTGGCTCGAGGACACTCTCTCTGAAGGAATAAGACAGTGGTGGG					
hu.19-B	1	ATGGCTGCCGATGGTTATCTTCCAGATTGGCTCGAGGACACTCTCTCTGAAGGAATAAGACAGTGGTGGG					
hu.49-B	1	ATGGCTGCCGATGGTTATCTTCCAGATTGGCTCAAGGACACTCTCTCTGAAGGAATAAGACAGTGGTGGG					
hu.52-B	1	ATGGCTGCCGATGGTTATCTTCCAGATTGGCTCGAGGACACTCTCTCTGAAGGAATAAGACAGTGGTGGG					
hu.13-B	1	ATGGCTGCCGATGGTTATCTTCCAGATTGGCTCGAGGACACTCTCTCTGAAGGAATAAGACAGTGGTGGG					
AAV2-B	1	ATGGCTGCCGATGGTTATCTTCCAGATTGGCTCGAGGACACTCTCTCTGAAGGAATAAGACAGTGGTGGG					
hu.20-B	1	ATGGCTGCCGATGGTTATCTTCCAGATTGGCTCGAGGACACTCTCTCTGAAGGAATAAGACAGTGGTGGG					
hu.24-B	1	ATGGCTGCCGATGGTTATCTTCCAGATTGGCTCGAGGACACCCCTCTCTGAAGGAATAAGACAGTGGTGGG					
hu.64-B	1	ATGGCTGCCGATGGTTATCTTCCAGATTGGCTCGAGGACACTCTCTCTGAAGGAATAAGACAGTGGTGGG					

FIG. 3A

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hu. 27-B 1 ATGGCTGCCGATGGTTATCTTCCAGATTGGCTCGAGGACACTCTCTCTGAAGGAATAAGACAGTGGTGGA
 hu. 21-B 1 ATGGCTGCCGATGGTTATCTTCCAGATTGGCTCGAGGACACCCCTCTCTGAAGGAATAAGACAGTGGTGGA
 hu. 22-B 1 ATGGCTGCCGATGGTTATCTTCCAGATTGGCTCGAGGACACTCTCTCTGAAGGAATAAGACAGTGGTGGA
 hu. 23-B 1 ATGGCTGCCGATGGTTATCTTCCAGATTGGCTCGAGGACACTCTCTCTGAAGGAATAAGACAGTGGTGGA
 hu. 7-C 1 ATGGCTGCCGATGGTTATCTTCCAGATTGGCTCGAGGACACTCTCTCTGAAGGAATAAGACAGTGGTGGA
 hu. 61-C 1 ATGGCTGCCGATGGTTATCTTCCAGATTGGCTCGAGGACACTCTCTCTGAAGGAATAAGACAGTGGTGGA
 rh. 56-C 1 ATGGCTGCCGATGGTTATCTTCCAGATTGGCTCGAGGACACTCTCTCTGAAGGAATAAGACAGTGGTGGA
 hu. 9-C 1 ATGGCTGCCGATGGTTATCTTCCAGATTGGCTCGAGGACACTCTCTCTGAAGGAATAAGACAGTGGTGGA
 hu. 54-C 1 ATGGCTGCCGATGGTTATCTTCCAGATTGGCTCGAGGACACTCTCTCTGAAGGAATAAGACAGTGGTGGA
 hu. 53-C 1 ATGGCTGCCGATGGTTATCTTCCAGATTGGCTCGAGGACACTCTCTCTGAAGGAATAAGACAGTGGTGGA
 hu. 60-C 1 ATGGCTGCCGATGGTTATCTTCCAGATTGGCTCGAGGACACTCTCTCTGAAGGAATAAGACAGTGGTGGA
 hu. 55-C 1 ATGGCTGCCGATGGTTATCTTCCAGATTGGCTCGAGGACACTCTCTCTGAAGGAATAAGACAGTGGTGGA
 hu. 2-C 1 ATGGCTGCCGATGGTTATCTTCCAGATTGGCTCGAGGACACTCTCTCTGAAGGAATAAGACAGTGGTGGA
 hu. 1-C 1 ATGGCTGCCGATGGTTATCTTCCAGATTGGCTCGAGGACACTCTCTCTGAAGGAATAAGACAGTGGTGGA
 hu. 18-C 1 ATGGCTGCCGATGGTTATCTTCCAGATTGGCTCGAGGACACTCTCTCTGAAGGAATAAGACAGTGGTGGA
 hu. 3-C 1 ATGGCTGCCGATGGTTATCTTCCAGATTGGCTCGAGGACACTCTCTCTGAAGGAATAAGACAGTGGTGGA
 hu. 25-C 1 ATGGCTGCCGATGGTTATCTTCCAGATTGGCTCGAGGACACTCTCTCTGAAGGAATAAGACAGTGGTGGA
 hu. 15-C 1 ATGGCTGCCGATGGTTATCTTCCAGATTGGCTCGAGGACACTCTCTCTGAAGGAATAAGACAGTGGTGGA
 hu. 16-C 1 ATGGCTGCCGATGGTTATCTTCCAGATTGGCTCGAGGACACTCTCTCTGAAGGAATAAGACAGTGGTGGA
 hu. 11-C 1 ATGGCTGCCGATGGTTATCTTCCAGATTGGCTCGAGGACACTCTCTCTGAAGGAATAAGACAGTGGTGGA
 hu. 10-C 1 ATGGCTGCCGATGGTTATCTTCCAGATTGGCTCGAGGACACTCTCTCTGAAGGAATAAGACAGTGGTGGA
 hu. 4-C 1 ATGGCTGCCGATGGTTATCTTCCAGATTGGCTCGAGGACACTCTCTCTGAAGGAATAAGACAGTGGTGGA
 rh. 54-D 1 ATGGCTGCTGACGGTTATCTTCCAGATTGGCTCGAGGACAACTCTCTGAGGGCATTCGCGAGTGGTGGG
 rh. 48-D 1 ATGGCTGCTGACGGTTATCTTCCAGATTGGCTCGAGGACAACTCTCTGAGGGCATTCGCGAGTGGTGGG
 rh. 55-D 1 ATGGCTGCCGATGGTTATCTTCCAGATTGGCTCGAGGACAACTCTCTGAGGGCATTCGCGAGTGGTGGG
 rh. 62-D 1 ATGGCTGCTGACGGTTATCTTCCAGATTGGCTCGAGGACAACTCTCTGAGGGCATTCGCGAGTGGTGGG
 AAV7-D 1 ATGGCTGCCGATGGTTATCTTCCAGATTGGCTCGAGGACAACTCTCTGAGGGCATTCGCGAGTGGTGGG
 rh. 52-E 1 ATGGCTGCCGATGGTTATCTTCCAGATTGGCTCGAGGACAACTCTCTGAGGGCATTCGCGAGTGGTGGG
 rh. 51-E 1 ATGGTTGCCGATGGTTATCTTCCAGATTGGCTCGAGGACAACTCTCTGAGGGCATTCGCGAGTGGTGGG
 hu. 39-E 1 ATGGCTGCCGATGGTTATCTTCCAGATTGGCTCGAGGACAACTCTCTGAGGGCATTCGCGAGTGGTGGG

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rh. 53-E	1	ATGGCTGCCGATGGTTATCTTCCAGATTGGCTCGAGGACAAACCTCTCTGAGGGCATTCGCGAGTGGTGGG	80	90	100	110	120	130	140
hu. 37-E	1	ATGGCTGCTGACGGTTATCTTCCAGATTGGCTCGAGGACAAACCTCTCTGAGGGCATTCGCGAGTGGTGGG						
rh. 43-E	1	ATGGCTGCCGATGGTTATCTTCCAGATTGGCTCGAGGACAAACCTCTCTGAGGGCATTCGCGAGTGGTGGG							
rh. 50-E	1	ATGGCTGCCGATGGTTATCTTCCAGATTGGCTCGAGGACAAACCTCTCTGAGGGCATTCGCGAGTGGTGGG							
rh. 49-E	1	ATGGCTGCCGATGGTTATCTTCCAGATTGGCTCGAGGACAAACCTCTCTGAGGGCATTCGCGAGTGGTGGG							
rh. 61-E	1	ATGGCTGCCGATGGTTATCTTCCAGATTGGCTCGAGGACAAACCTCTCTGAGGGCATTCGCGAGTGGTGGG							
hu. 41-E	1	ATGGCTGCTGACGGTTATCTTCCAGATTGGCTCGAGGACAAACCTCTCTGAGGGCATTCGCGAGTGGTGGG							
rh. 64-E	1	ATGGCTGCCGATGGTTATCTTCCAGATTGGCTCGAGGACAAACCTCTCTGAGGGCATTCGCGAGTGGTGGG							
hu. 42-E	1	ATGGCTGCTGACGGTTATCTTCCAGATTGGCTCGAGGACAAACCTCTCTGAGGGCATTCGCGAGTGGTGGG							
rh. 57-E	1	ATGGCTGCCGATGGTTATCTTCCAGATTGGCTCGAGGACAAACCTCTCTGAGGGCATTCGCGAGTGGTGGG							
hu. 40-E	1	ATGGCTGCTGACGGTTATCTTCCAGATTGGCTCGAGGACAAACCTCTCTGAGGGCATTCGCGAGTGGTGGG							
AAV8-E	1	ATGGCTGCCGATGGTTATCTTCCAGATTGGCTCGAGGACAAACCTCTCTGAGGGCATTCGCGAGTGGTGGG							
rh. 58-E	1	ATGGCTGCTGACGGTTATCTTCCAGATTGGCTCGAGGACAAACCTCTCTGAGGGCATTCGCGAGTGGTGGG							
rh. 40-E	1	ATGGCTGCTGACGGTTATCTTCCAGATTGGCTCGAGGACAAACCTCTCTGAGGGCATTCGCGAGTGGTGGG							
hu. 67-E	1	ATGGCTGCTGACGGTTATCTTCCAGATTGGCTCGAGGACAAACCTCTCTGAGGGCATTCGCGAGTGGTGGG							
hu. 17-E	1	ATGGCTGCCGATGGTTATCTTCCAGATTGGCTCGAGGACAAACCTCTCTGAGGGCATTCGCGAGTGGTGGG							
hu. 6-E	1	ATGGCTGCCGATGGTTATCTTCCAGATTGGCTCGAGGACAAACCTCTCTGAGGGCATTCGCGAGTGGTGGG							
hu. 66-E	1	ATGGCTGCTGACGGTTATCTTCCAGATTGGCTCGAGGACAAACCTCTCTGAGGGCATTCGCGAGTGGTGGG							
rh. 38-E	1	ATGGCTGCTGACGGTTATCTTCCAGATTGGCTCGAGGACAAACCTCTCTGAGGGCATTCGCGAGTGGTGGG							
hu. 32-F	1	ATGGCTGCCGATGGTTATCTTCCAGATTGGCTCGAGGACAACTCTCTCTGAAGGAATAAGACAGTGGTGGGA							
AAV9/hu	1	ATGGCTGCCGATGGTTATCTTCCAGATTGGCTCGAGGACAAACCTTAGTGAAGGAATTCGCGAGTGGTGGG							
hu. 31-F	1	ATGGCTGCCGATGGTTATCTTCCAGATTGGCTCGAGGACAACTCTCTCTGAAGGAATAAGACAGTGGTGGGA							
AAV5	68							
AAV3-3	71	GCCTTGAAGCGGGCCACCGAAACCAAAACCCCAATCAGCAGCATCAAGATCAAGCCCCGTGGTCTTGTGCT							
AAV4-4	68	CTCTGAAACCTGGAGTCCCTCAACCCCAAGCGAACCAACACACAGGACAACCGTCGGGGTCTTGTGCT							
AAV1-A	71	CGCTGCAACCTGGAGCCCCCTAAACCCCAAGGCAATCAACAACATCAGGACAACGCTCGGGGTCTTGTGCT							
hu. 46-A	71	AGCTCAAACCTGGCCCCACCAACCAAGCCCCCGAGCGGCATAAGGACGACAGCAGGGGTCTTGTGCT							

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hu. 48-A	71	ACTTGAACCTGGAGCCCCGGAAGCCCCAAAGCCAAACCCAGCAAAAGCAGACGACGGCCCGGGTCTTGGTGCT
hu. 44-A	71	AGCTCAGACCTGGCCCCACCAACCAACAAAGCCCGCAGAGCGGCATAAGGACGACGACGAGGGGTCTTGTGCT
hu. 43-A	71	ACCTGAAACCTGGAGCCCCCAAGCCCAAGCCCAACCCAGCAGAGCAGGACGACGCGCCGGGTCTTGGTGCT
AAV6-A	71	ACTTGAACCTGGAGCCCCGGAACCCAAAGCCAAACCCAGCAAAAGCAGACGACGCGCCGGGTCTTGGTGCT
hu. 34-B	71	AGCTCAACCTGGCCCCACCAACCAACAGAGCCCGCAGAGCGGCATAAGGACGACGACGAGGGGTCTTGTGCT
hu. 47-B	71	AGCTCAACCTGGCCCCACCAACCAAGCCCGCAGAGCGGCATAAGGACGACGACGAGGGGTCTTGTGCT
hu. 29-B	71	AGCTCAACCTGGCCCCACCAACCAAGCCCGCAGAGCGGCATAAGGACGACGACGAGGGGTCTTGTGCT
hu. 63-B	71	AGCTCAACCTGGCCCCACCAACCAAGCCCGCAGAGCGGCATAAGGACGACGACGAGGGGTCTTGTGCT
hu. 56-B	71	AGCTCAACCTGGCCCCACCAACCAAGCCCGCAGAGCGGCATAAGGACGACGACGAGGGGTCTTGTGCT
hu. 45-B	71	AGCTCAACCTGGCCCCACCAACCAAGCCCGCAGAGCGGCATAAGGACGACGACGAGGGGTCTTGTGCT
hu. 57-B	71	AGCTCAACCTGGCCCCACCAACCAAGCCCGCAGAGCGGCATAAGGACGACGACGAGGGGTCTTGTGCT
hu. 35-B	71	AGCTCAACCTGGCCCCACCAACCAAGCCCGCAGAGCGGCATAAGGACGACGACGAGGGGTCTTGTGCT
hu. 58-B	71	AGCTCAACCTGGCCCCACCAACCAAGCCCGCAGAGCGGCATAAGGACGACGACGAGGGGTCTTGTGCT
hu. 28-B	71	AACTCAACCTGGCCCCACCAACCAAGCCCGCAGAGCGGCATAAGGACGACGACGAGGGGTCTTGTGCT
hu. 51-B	71	AGCTCAACCTGGCCCCACCAACCAAGCCCGCAGAGCGGCATAAGGACGACGACGAGGGGTCTTGTGCT
hu. 19-B	71	AGCTCAACCTGGCCCCACCAACCAAGCCCGCAGAGCGGCATAAGGACGACGACGAGGGGTCTTGTGCT
hu. 49-B	71	AGCTCAACCTGGCCCCACCAACCAAGCCCGCAGAGCGGCATAAGGACGACGACGAGGGGTCTTGTGCT
hu. 52-B	71	AGCTCAACCTGGCCCCACCAACCAAGCCCGCAGAGCGGCATAAGGACGACGACGAGGGGTCTTGTGCT
hu. 13-B	71	AGCTCAACCTGGCCCCACCAACCAAGCCCGCAGAGCGGCATAAGGACGACGACGAGGGGTCTTGTGCT
AAV2-B	71	AGCTCAACCTGGCCCCACCAACCAAGCCCGCAGAGCGGCATAAGGACGACGACGAGGGGTCTTGTGCT
hu. 20-B	71	AGCTCAACCTGGCCCCACCAACCAAGCCCGCAGAGCGGCATAAGGACGACGACGAGGGGTCTTGTGCT
hu. 24-B	71	AGCTCAACCTGGCCCCACCAACCAAGCCCGCAGAGCGGCATAAGGACGACGACGAGGGGTCTTGTGCT
hu. 64-B	71	AGCTCAACCTGGCCCCACCAACCAAGCCCGCAGAGCGGCATAAGGACGACGACGAGGGGTCTTGTGCT
hu. 27-B	71	AGCTCAACCTGGCCCCACCAACCAAGCCCGCAGAGCGGCATAAGGACGACGACGAGGGGTCTTGTGCT
hu. 21-B	71	AGCTCAACCTGGCCCCACCAACCAAGCCCGCAGAGCGGCATAAGGACGACGACGAGGGGTCTTGTGCT
hu. 22-B	71	AGCTCAACCTGGCCCCACCAACCAAGCCCGCAGAGCGGCATAAGGACGACGACGAGGGGTCTTGTGCT
hu. 23-B	71	AGCTCAACCTGGCCCCACCAACCAAGCCCGCAGAGCGGCATAAGGACGACGACGAGGGGTCTTGTGCT
hu. 7-C	71	AGCTCAACCTGGCCCCACCAACCAAGCCCGCAGAGCGGCATAAGGACGACGACGAGGGGTCTTGTGCT
hu. 61-C	71	AGCTCAACCTGGCCCCACCAACCAAGCCCGCAGAGCGGCATAAGGACGACGACGAGGGGTCTTGTGCT
rh. 56-C	71	AGCTCAACCTGGCCCCACCAACCAAGCCCGCAGAGCGGCATAAGGACGACGACGAGGGGTCTTGTGCT

FIG. 3D

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hu. 9-C	71	AGTCAAACCTGGCCCCACCAACCAAGCCCCGAGAGCGGCGATCAGGACAAACAGCAGGGGCTCTTGTGCT
hu. 54-C	71	AGTCAAACCTGGCCCCACCAACCAAGCCCCGAGAGCGGCGATAAGGACGACAGCAGGGGCTCTTGTGCT
hu. 53-C	71	AGTCAAACCTGGCCCCACCAACCAAGCCCCGAGAGCGGCGATAAGGACGACAGCAGGGGCTCTTGTGCT
hu. 60-C	71	AGTCAAACCTGGCCCCACCAACCAAGCCCCGAGAGCGGCGATAAGGACGACAGCAGGGGCTCTTGTGCT
hu. 55-C	71	AGTCAAACCTGGCCCCACCAACCAAGCCCCGAGAGCGGCGATAAGGACGACAGCAGGGGCTCTTGTGCT
hu. 2-C	71	AGTCAAACCTGGCCCCACCAACCAAGCCCCGAGAGCGGCGATAAGGACGACAGCAGGGGCTCTTGTGCT
hu. 1-C	71	AGTCAAACCTGGCCCCACCAACCAAGCCCCGAGAGCGGCGATAAGGACGACAGCAGGGGCTCTTGTGCT
hu. 18-C	71	AGTCAAACCTGGCCCCACCAACCAAGCCCCGAGAGCGGCGATAAGGACGACAGCAGGGGCTCTTGTGCT
hu. 3-C	71	AGTCAAACCTGGCCCCACCAACCAAGCCCCGAGAGCGGCGATAAGGACGACAGCAGGGGCTCTTGTGCT
hu. 25-C	71	AGTCAAACCTGGCCCCACCAACCAAGCCCCGAGAGCGGCGATAAGGACGACAGCAGGGGCTCTTGTGCT
hu. 15-C	71	AGTCAAACCTGGCCCCACCAACCAAGCCCCGAGAGCGGCGATAAGGACGACAGCAGGGGCTCTTGTGCT
hu. 16-C	71	AGTCAAACCTGGCCCCACCAACCAAGCCCCGAGAGCGGCGATAAGGACGACAGCAGGGGCTCTTGTGCT
hu. 11-C	71	AGTCAAACCTGGCCCCACCAACCAAGCCCCGAGAGCGGCGATAAGGACGACAGCAGGGGCTCTTGTGCT
hu. 10-C	71	AGTCAAACCTGGCCCCACCAACCAAGCCCCGAGAGCGGCGATAAGGACGACAGCAGGGGCTCTTGTGCT
hu. 4-C	71	AGTCAAACCTGGCCCCACCAACCAAGCCCCGAGAGCGGCGATAAGGACGACAGCAGGGGCTCTTGTGCT
rh. 54-D	71	ACCTGAAACCTGGAGCCCCGAAACCCAAAGCCAAACCAGCAGAAAGCAGGACGAGCGGCCGGGGCTCTGGTGCT
rh. 48-D	71	ACCTGAAACCTGGAGCCCCGAAACCCAAAGCCAAACCAGCAGAAAGCAGGACGAGCGGCCGGGGCTCTGGTGCT
rh. 55-D	71	ACCTGAAACCTGGAGCCCCGAAACCCAAAGCCAAACCAGCAGAAAGCAGGACGAGCGGCCGGGGCTCTGGTGCT
rh. 62-D	71	ACCTGAAACCTGGAGCCCCGAAACCCAAAGCCAAACCAGCAGAAAGCAGGACGAGCGGCCGGGGCTCTGGTGCT
AAV7-D	71	ACCTGAAACCTGGAGCCCCGAAACCCAAAGCCAAACCAGCAGAAAGCAGGACGAGCGGCCGGGGCTCTGGTGCT
rh. 52-E	71	ACCTGAAACCTGGAGCCCCGAAACCCAAAGCCAAACCAGCAGAAAGCAGGACGAGCGGCCGGGGCTCTGGTGCT
rh. 51-E	71	ACCTGAAACCTGGAGCCCCGAAACCCAAAGCCAAACCAGCAGAAAGCAGGACGAGCGGCCGGGGCTCTGGTGCT
hu. 39-E	71	ACCTGAAACCTGGAGCCCCGAAACCCAAAGCCAAACCAGCAGAAAGCAGGACGAGCGGCCGGGGCTCTGGTGCT
rh. 53-E	71	ACCTGAAACCTGGAGCCCCGAAACCCAAAGCCAAACCAGCAGAAAGCAGGACGAGCGGCCGGGGCTCTGGTGCT
hu. 37-E	71	ACCTGAAACCTGGAGCCCCGAAACCCAAAGCCAAACCAGCAGAAAGCAGGACGAGCGGCCGGGGCTCTGGTGCT
rh. 43-E	71	ACCTGAAACCTGGAGCCCCGAAACCCAAAGCCAAACCAGCAGAAAGCAGGACGAGCGGCCGGGGCTCTGGTGCT
rh. 50-E	71	ACCTGAAACCTGGAGCCCCGAAACCCAAAGCCAAACCAGCAGAAAGCAGGACGAGCGGCCGGGGCTCTGGTGCT
rh. 49-E	71	ACCTGAAACCTGGAGCCCCGAAACCCAAAGCCAAACCAGCAGAAAGCAGGACGAGCGGCCGGGGCTCTGGTGCT
rh. 61-E	71	ACCTGAAACCTGGAGCCCCGAAACCCAAAGCCAAACCAGCAGAAAGCAGGACGAGCGGCCGGGGCTCTGGTGCT
hu. 41-E	71	ACCTGAAACCTGGAGCCCCGAAACCCAAAGCCAAACCAGCAGAAAGCAGGACGAGCGGCCGGGGCTCTGGTGCT

FIG. 3E

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rh. 64-E	71	ACCTGAAACCTGGAGCCCCGAAACCCAAAGCCAAACCAGCAAAAGCAGGACGACGGCCGGGGTCTGGTGCT	150
hu. 42-E	71	ACCTGAAACCTGGAGCCCCCAAGCCCAAGCCAAACCAGCAGAAGCAGGACGACGGCCGGGGTCTGGTGCT	150
rh. 57-E	71	CGTGAAACCTGGAGCCCCGAAAGCCCAAGCCAAACCAGCAAAAGCAGGACGACGGCCGGGGTCTGGTGCT	150
hu. 40-E	71	ACCTGAAACCTGGAGCCCCCAAGCCCAAGCCAAACCAGCAGAAGCAGGACGACGGCCGGGGTCTGGTGCT	150
AAV8-E	71	CGTGAAACCTGGAGCCCCGAAAGCCCAAGCCCAAGCCAAACCAGCAGAAGCAGGACGACGGCCGGGGTCTGGTGCT	150
rh. 58-E	71	ACCTGAAACCTGGAGCCCCCAAGCCCAAGCCCAAGCCAAACCAGCAGAAGCAGGACGACGGCCGGGGTCTGGTGCT	150
rh. 40-E	71	ACCTGAAACCTGGAGCCCCCAAGCCCAAGCCCAAGCCAAACCAGCAGAAGCAGGACGACGGCCGGGGTCTGGTGCT	150
hu. 67-E	71	ACCTGAAACCTGGAGCCCCCAAGCCCAAGCCCAAGCCAAACCAGCAGAAGCAGGACGACGGCCGGGGTCTGGTGCT	150
hu. 17-E	71	ACTTGAAACCTGGAGCCCCGAAACCCAAAGCCAAACCAGCAAAAGCAGGACGACGGCCGGGGTCTGGTGCT	150
hu. 6-E	71	ACTTGAAACCTGGAGCCCCGAAACCCAAAGCCAAACCAGCAAAAGCAGGACGACGGCCGGGGTCTGGTGCT	150
hu. 66-E	71	ACCTGAAACCTGGAGCCCCCAAGCCCAAGCCCAAGCCAAACCAGCAGAAGCAGGACGACGGCCGGGGTCTGGTGCT	150
rh. 38-E	71	ACCTGAAACCTGGAGCCCCCAAGCCCAAGCCCAAGCCAAACCAGCAGAAGCAGGACGACGGCCGGGGTCTGGTGCT	150
hu. 32-F	71	AGCTCAAACCTGGAGCCCCCAAGCCCAAGCCCAAGCCAAACCAGCAAAAGCAGGACGACGGCCGGGGTCTGGTGCT	150
AAV9/hu	71	CTTTGAAACCTGGAGCCCCCTCAACCCAAAGGCAATCAACAACATCAAGACAACGCTCGAGGCTCTTGTGCT	150
hu. 31-F	71	AGCTCAAACCTGGAGCCCCCAACCAACCAAGCCCGCAGAGCGGCAATAAGGACGACAGGAGGCTCTTGTGCT	150
AAV5	138	150
AAV3-3	141	GCCTGGTTATAACTATCTCGGACCCCGGAAACGGTCTCGATCGAGGAGAGCCTGTCAACAGGGCAGACGAG	150
AAV4-4	138	TCCGGGTTACAAATACCTCGGACCCCGGTAACGGACTCGACAAAGGAGAGCCGGTCAACAGGGCAGCGG	150
AAV1-A	141	TCCGGGTTACAAATACCTCGGACCCCGGCAACGGACTCGACAAAGGGGAAACCCGTCAACGAGCGGACGCG	150
hu. 46-A	141	TCCTGGCTACAAGTACCTCGGACCCCTTCAACGGACTCGACAAAGGGGAGCCCGTCAACGCGGCGGACGCA	150
hu. 48-A	141	TCCTGGGTACAAGTACCTCGGACCCCTTCAACGGACTCGACAAAGGGGAGCCCGTCAACGCGGCGGACGCA	150
hu. 44-A	141	TCCTGGGTACAAGTACCTCGGACCCCTTCAACGGACTCGACAAAGGGGAGCCCGTCAACGAGGACGACGCC	150
hu. 43-A	141	TCCTGGGTACAAGTACCTCGGACCCCTTCAACGGACTCGACAAAGGGGAGCCCGTCAACGCGGCGGACGCA	150
AAV6-A	141	TCCTGGGTACAAGTACCTCGGACCCCTTCAACGGACTCGACAAAGGGGAGCCCGTCAACGCGGCGGATGCA	150
hu. 34-B	141	TCCTGGGTACAAGTACCTCGGACCCCTTCAACGGACTCGACAAAGGGGAGCCCGTCAACGAGGACGACGCC	150
hu. 47-B	141	TCCTGGGTACAAGTACCTCGGACCCCTTCAACGGACTCGACAAAGGGGAGCCCGTCAACGAGGACGACGCC	150
hu. 29-B	141	TCCTGGGTACAAGTACCTCGGACCCCTTCAACGGACTCGACAAAGGGGAGCCCGTCAACGAGGACGACGCC	150

hu. 63-B	141	TCCTGGGTACAAGTACCTTGGACCCCTTCAACGGACTCGACAAGGGAGAGCCGGTCAACGAGGCAGACGCC
hu. 56-B	141	TCCTGGGTACAAGTACCTCGGACCCCTTCAACGGACTCGACAAGGGAGAGCCGGTCAACGAGGCAGACGCC
hu. 45-B	141	TCCTGGGTACAAGTACCTCGGACCCCTTCAACGGACTCGACAAGGGAGAGCCGGTCAACGAGGCAGACGCC
hu. 57-B	138	TCCTGGGTACAAGTACCTCGGACCCCTTCAACGGACTCGACAAGGGAGAGCCGGTCAACGAGGCAGACGCC
hu. 35-B	141	TCCTGGGTACAAGTACCTCGGACCCCTTCAACGGACTCGACAAGGGAGAGCCGGTCAACGAGGCAGACGCC
hu. 58-B	141	TCCTGGGTACAAGTACCTCGGACCCCTTCAACGGACTCGACAAGGGAGAGCCGGTCAACGAGGCAGACGCC
hu. 28-B	141	TCCTGGGTACAAGTACCTCGGACCCCTTCAACGGACTCGACAAGGGAGAGCCGGTCAACGAGGCAGACGCC
hu. 51-B	141	TCCTGGGTACAAGTACCTCGGACCCCTTCAACGGACTCGACAAGGGAGAGCCGGTCAACGAGGCAGACGCC
hu. 19-B	141	TCCTGGGTACAAGTACCTCGGACCCCTTCAACGGACTCGACAAGGGAGAGCCGGTCAACGAGGCAGACGCC
hu. 49-B	141	TCCTGGGTACAAGTACCTCGGACCCCTTCAACGGACTCGACAAGGGAGAGCCGGTCAACGAGGCAGACGCC
hu. 52-B	141	TCCTGGGTACAAGTACCTCGGACCCCTTCAACGGACTCGACAAGGGAGAGCCGGTCAACGAGGCAGACGCC
hu. 13-B	141	TCCTGGGTACAAGTACCTCGGACCCCTTCAACGGACTCGACAAGGGAGAGCCGGTCAACGAGGCAGACGCC
AAV2-B	141	TCCTGGGTACAAGTACCTCGGACCCCTTCAACGGACTCGACAAGGGAGAGCCGGTCAACGAGGCAGACGCC
hu. 20-B	141	TCCTGGGTACAAGTACCTCGGACCCCTTCAACGGACTCGACAAGGGAGAGCCGGTCAACGAGGCAGACGCC
hu. 24-B	141	TCCTGGGTACAAGTACCTCGGACCCCTTCAACGGACTCGACAAGGGAGAGCCGGTCAACGAGGCAGACGCC
hu. 64-B	141	TCCTGGGTACAAGTACCTTGGACCCCTTCAACGGACTCGACAAGGGAGAGCCGGTCAACGAGGCAGACGCC
hu. 27-B	141	TCCTGGGTACAAGTACCTCGGACCCCTTCAACGGACTCGACAAGGGAGAGCCGGTCAACGAGGCAGACGCC
hu. 21-B	141	TCCTGGGTACAAGTACCTCGGACCCCTTCAACGGACTCGACAAGGGAGAGCCGGTCAACGAGGCAGACGCC
hu. 22-B	141	TCCTGGGTACAAGTACCTCGGACCCCTTCAACGGACTCGACAAGGGAGAGCCGGTCAACGAGGCAGACGCC
hu. 23-B	141	TCCTGGGTACAAGTACCTCGGACCCCTTCAACGGACTCGACAAGGGAGAGCCGGTCAACGAGGCAGACGCC
hu. 7-C	141	TCCTGGGTACAAGTACCTCGGACCCCTTCAACGGACTCGACAAGGGAGAGCCGGTCAACGAGGCAGACGCC
hu. 61-C	141	TCCTGGGTACAAGTACCTCGGACCCCTTCAACGGACTCGACAAGGGAGAGCCGGTCAACGAGGCAGACGCC
rh. 56-C	141	TCCTGGGTACAAGTACCTCGGACCCCTTCAACGGACTCGACAAGGGAGAGCCGGTCAACGAGGCAGACGCC
hu. 9-C	141	TCCTGGGTACAAGTACCTCGGACCCCTTCAACGGACTCGACAAGGGAGAGCCGGTCAACGAGGCAGACGCC
hu. 54-C	141	TCCTGGGTACAAGTACCTCGGACCCCTTCAACGGACTCGACAAGGGAGAGCCGGTCAACGAGGCAGACGCC
hu. 53-C	141	TCCTGGGTACAAGTACCTCGGACCCCTTCAACGGACTCGACAAGGGAGAGCCGGTCAACGAGGCAGACGCC
hu. 60-C	141	TCCTGGGTACAAGTACCTCGGACCCCTTCAACGGACTCGACAAGGGAGAGCCGGTCAACGAGGCAGACGCC
hu. 55-C	141	TCCTGGGTACAAGTACCTCGGACCCCTTCAACGGACTCGACAAGGGAGAGCCGGTCAACGAGGCAGACGCC
hu. 2-C	141	TCCTGGGTACAAGTACCTCGGACCCCTTCAACGGACTCGACAAGGGAGAGCCGGTCAACGAGGCAGACGCC
hu. 1-C	141	TCCTGGGTACAAGTACCTCGGACCCCTTCAACGGACTCGACAAGGGAGAGCCGGTCAACGAGGCAGACGCC

FIG. 3G

hu. 18-C	141	TCCTGGGTACAAGTACCTCGGACCCCTTCAACGGACTCGACAAGGGAGAGCCCGGTCAACGAGGCAGACGCC
hu. 3-C	141	TCCTGGGTACAAGTACCTCGGACCCCTTCAACGGACTCGACAAGGGAGAGCCCGGTCAACGAGGCAGACGCC
hu. 25-C	141	TCCTGGGTACAAGTACCTCGGACCCCTTCAACGGACTCGACAAGGGAGAGCCCGGTCAACGAGGCAGACGCC
hu. 15-C	141	TCCTGGGTACAAGTACCTCGGACCCCTTCAACGGACTCGACAAGGGAGAGCCCGGTCAACGAGGCAGACGCC
hu. 16-C	141	TCCTGGGTACAAGTACCTCGGACCCCTTCAACGGACTCGACAAGGGAGAGCCCGGTCAACGAGGCAGACGCC
hu. 11-C	141	TCCTGGGTACAAGTACCTCGGACCCCTTCAACGGACTCGACAAGGGAGAGCCCGGTCAACGAGGCAGACGCC
hu. 10-C	141	TCCTGGGTACAAGTACCTCGGACCCCTTCAACGGACTCGACAAGGGAGAGCCCGGTCAACGAGGCAGACGCC
hu. 4-C	141	TCCTGGGTACAAGTACCTCGGACCCCTTCAACGGACTCGACAAGGGAGAGCCCGGTCAACGAGGCAGACGCC
rh. 54-D	141	TCCTGGCTACAAGTACCTCGGACCCCTTCAACGGACTCGACAAGGGAGAGCCCGGTCAACGCGGCGGACGCCA
rh. 48-D	141	TCCTGGCTACAAGTACCTCGGACCCCTTCAACGGACTCGACAAGGGAGAGCCCGGTCAACGCGGCGGACGCCA
rh. 55-D	141	TCCTGGCTACAAGTACCTCGGACCCCTTCAACGGACTCGACAAGGGAGAGCCCGGTCAACGCGGCGGACGCCA
rh. 62-D	141	TCCTGGCTACAAGTACCTCGGACCCCTTCAACGGACTCGACAAGGGAGAGCCCGGTCAACGCGGCGGACGCCA
AAV7-D	141	TCCTGGCTACAAGTACCTCGGACCCCTTCAACGGACTCGACAAGGGAGAGCCCGGTCAACGCGGCGGACGCCA
rh. 52-E	141	TCCTGGCTACAAGTACCTCGGACCCCTTCAACGGACTCGACAAGGGAGAGCCCGGTCAACGCGGCGGACGCCA
rh. 51-E	141	TCCTGGCTACAAGTACCTCGGACCCCTTCAACGGACTCGACAAGGGAGAGCCCGGTCAACGCGGCGGACGCCA
hu. 39-E	141	TCCTGGCTACAAGTACCTCGGACCCCTTCAACGGACTCGACAAGGGAGAGCCCGGTCAACGCGGCGGACGCCA
rh. 53-E	141	TCCTGGCTACAAGTACCTCGGACCCCTTCAACGGACTCGACAAGGGAGAGCCCGGTCAACGCGGCGGACGCCA
hu. 37-E	141	TCCTGGCTACAAGTACCTCGGACCCCTTCAACGGACTCGACAAGGGAGAGCCCGGTCAACGCGGCGGACGCCA
rh. 43-E	141	TCCTGGCTACAAGTACCTCGGACCCCTTCAACGGACTCGACAAGGGAGAGCCCGGTCAACGCGGCGGACGCCA
rh. 50-E	141	TCCTGGCTACAAGTACCTCGGACCCCTTCAACGGACTCGACAAGGGAGAGCCCGGTCAACGCGGCGGACGCCA
rh. 49-E	141	TCCTGGCTACAAGTACCTCGGACCCCTTCAACGGACTCGACAAGGGAGAGCCCGGTCAACGCGGCGGACGCCA
rh. 61-E	141	TCCTGGCTACAAGTACCTCGGACCCCTTCAACGGACTCGACAAGGGAGAGCCCGGTCAACGCGGCGGACGCCA
hu. 41-E	141	TCCTGGCTACAAGTACCTCGGACCCCTTCAACGGACTCGACAAGGGAGAGCCCGGTCAACGCGGCGGACGCCA
rh. 64-E	141	TCCTGGCTACAAGTACCTCGGACCCCTTCAACGGACTCGACAAGGGAGAGCCCGGTCAACGCGGCGGACGCCA
hu. 42-E	141	TCCTGGCTACAAGTACCTCGGACCCCTTCAACGGACTCGACAAGGGAGAGCCCGGTCAACGCGGCGGACGCCA
rh. 57-E	141	TCCTGGCTACAAGTACCTCGGACCCCTTCAACGGACTCGACAAGGGAGAGCCCGGTCAACGCGGCGGACGCCA
hu. 40-E	141	TCCTGGCTACAAGTACCTCGGACCCCTTCAACGGACTCGACAAGGGAGAGCCCGGTCAACGCGGCGGACGCCA
AAV8-E	141	TCCTGGCTACAAGTACCTCGGACCCCTTCAACGGACTCGACAAGGGAGAGCCCGGTCAACGCGGCGGACGCCA
rh. 58-E	141	TCCTGGCTACAAGTACCTCGGACCCCTTCAACGGACTCGACAAGGGAGAGCCCGGTCAACGCGGCGGACGCCA
rh. 40-E	141	TCCTGGCTACAAGTACCTCGGACCCCTTCAACGGACTCGACAAGGGAGAGCCCGGTCAACGCGGCGGACGCCA

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hu. 67-E	141	TCTTGGCTACAAGTACCTCGGACCCCTTCAACGGACTCGACAAGGGGAGCCCGTCAATGCGGGGACGCA	220	230	240	250	260	270	280
hu. 17-E	141	TCCTGGCTGCAAGTACCTCGGACCCCTTCAACGGACTCGACAAGGGGAGCCCGTCAACGGGGGACGCA						
hu. 6-E	141	TCCTGGCTACAAGTACCTCGGACCCCTTCAACGGACTCGACAAGGGGAGCCCGTCAACGGGGGACGCA							
hu. 66-E	141	TCCTGGCTACAAGTACCTCGGACCCCTTCAACGGACTCGACAAGGGGAGCCCGTCAACGGGGGACGCA							
rh. 38-E	141	TCCTGGCTACAAGTACCTCGGACCCCTTCAACGGACTCGACAAGGGGAGCCCGTCAACGGGGGACGCA							
hu. 32-F	141	TCCTGGGTACAAGTACCTCGGACCCCGCAACGGACTCGACAAGGGGAGCCCGTCAACGCAGACGCGG							
AAV9/hu	141	TCCGGGTTACAAATACCTTGGACCCCGCAACGGACTCGACAAGGGGAGCCCGTCAACGCAGACGCGG							
hu. 31-F	141	TCCTGGGTACAAGTACCTCGGACCCCGCAACGGACTCGACAAGGGGAGCCCGTCAACGCAGACGCGG							
AAV5	208							
AAV3-3	211	GTGCGCGGAGAGCAGACATCTCGTACAAACGAGCAGCTTGAGGCGGGAGACAAACCCCTACCTCAAGTACA							
AAV4-4	208	GCAAGCCCTCGAACACGACAAAGCTTACGACCAGCAGCTCAAGGCCGGTGACAAACCCCTACCTCAAGTACA							
AAV1-A	211	GCAAGCCCTCGAGCAGCAGAAAGGCTACGACCAGCAGCTCAAGGCCGGTGACAAATCCGTACCTGCGGTATA							
hu. 46-A	211	GCGGCCCTCGAGCAGCAGAAAGCCTACGACCCGCGAGCTCGACAGCGGAGACAAACCCCTACCTCAAGTACA							
hu. 48-A	211	GCGGCCCTCGAGCAGCAGAAAGCCTACGACCCGCGAGCTCAAGGCCGGTGACAAATCCGTACCTGCGGTATA							
hu. 44-A	211	GCGGCCCTCGAGCAGCAGAAAGCCTACGACCCGCGAGCTCGACAGCGGAGACAAACCCCTACCTCAAGTACA							
hu. 43-A	211	GCGGCCCTCGAGCAGCAGAAAGCCTACGACCCGCGAGCTCAAGGCCGGTGACAAATCCGTACCCGCGGTATA							
AAV6-A	211	GCGGCCCTCGAGCAGCAGAAAGCCTACGACCCGCGAGCTCAAGGCCGGTGACAAATCCGTACCTGCGGTATA							
hu. 34-B	211	GCGGCCCTCGAGCAGCAGAAAGCCTACGACCCGCGAGCTCGACAGCGGAGACAAACCCCTACCTCAAGTACA							
hu. 47-B	211	GCGGCCCTCGAGCAGCAGAAAGCCTACGACCCGCGAGCTCGACAGCGGAGACAAACCCCTACCTCAAGTACA							
hu. 29-B	211	GCGGCCCTCGAGCAGCAGAAAGCCTACGACCCGCGAGCTCGACAGCGGAGACAAACCCCTACCTCAAGTACA							
hu. 63-B	211	GCGGCCCTCGAGCAGCAGAAAGCCTACGACCCGCGAGCTCGACAGCGGAGACAAACCCCTACCTCAAGTACA							
hu. 56-B	211	GCGGCCCTCGAGCAGCAGAAAGCCTACGACCCGCGAGCTCGACAGCGGAGACAAACCCCTACCTCAAGTACA							
hu. 45-B	211	GCGGCCCTCGAGCAGCAGAAAGCCTACGACCCGCGAGCTCGACAGCGGAGACAAACCCCTACCTCAAGTACA							
hu. 57-B	208	GCGGCCCTCGAGCAGCAGAAAGCCTACGACCCGCGAGCTCGACAGCGGAGACAAACCCCTACCTCAAGTACA							
hu. 35-B	211	GCGGCCCTCGAGCAGCAGAAAGCCTACGACCCGCGAGCTCGACAGCGGAGACAAACCCCTACCTCAAGTACA							
hu. 58-B	211	GCGGCCCTCGAGCAGCAGAAAGCCTACGACCCGCGAGCTCGACAGCGGAGACAAACCCCTACCTCAAGTACG							
hu. 28-B	211	GCGGCCCTCGAGCAGCAGAAAGCCTACGACCCGCGAGCTCGACAGCGGAGACAAACCCCTACCTCAAGTACA							

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hu. 51-B	211	GGGCCCCGAGCAGCAAAAGCCCTACGACCCGGCAGCTCGACAGCGGAGACAACCCGTACCTCAAGTACA
hu. 19-B	211	GGGCCCCGAGCAGCAAGGCCCTACGACCCGGCAGCTCGACAGCGGAGACAACCCGTACCTCAAGTACA
hu. 49-B	211	GGGCCCCGAGTACGACAAGGCCCTACGACCCGGCAGCTCGACAGCGGAGACAACCCGTACCTCAAGTACA
hu. 52-B	211	GGGCCCCGAGCAGCAAAAGCCCTACGACCCGGCAGCTCGACAGCGGAGACAACCCGTACCTCAAGTACA
hu. 13-B	211	GGGCCCCGAGCAGCAAGGCCCTACGACCCGGCAGCTCGACAGCGGAGACAACCCGTACCTCAAGTACA
AAV2-B	211	GGGCCCCGAGCAGCAAAAGCCCTACGACCCGGCAGCTCGACAGCGGAGACAACCCGTACCTCAAGTACA
hu. 20-B	211	GGGCCCCGAGCAGCAAGGCCCTACGACCCGGCAGCTCGACAGCGGAGACAACCCGTACCTCAAGTACA
hu. 24-B	211	GGGCCCCGAGCAGCAAGGCCCTACGACCCGGCAGCTCGACAGCGGAGATAACCCGTACCTCAAGTACA
hu. 64-B	211	GGGCCCCGAGCAGCAAGGCCCTACGACCCGGCAGCTCGACGGCGGAGACAACCCGTACCTCAAGTACA
hu. 27-B	211	GGGCCCCGAGCAGCAAGGCCCTACGACCCGGCAGCTCGACAGCGGAGACAACCCGTACCTCAAGTACA
hu. 21-B	211	GGGCCCCGAGCAGCAAGGCCCTACGACCCGGCAGCTCGACAGCGGAGATAACCCGTACCTCAAGTACA
hu. 22-B	211	GGGCCCCGAGCAGCAAGGCCCTACGACCCGGCAGCTCGACAGCGGAGACAACCCGTACCTCAAGTACA
hu. 23-B	211	GGGCCCCGAGCAGCAAGGCCCTACGACCCGGCAGCTCGACAGCGGAGACAACCCGTACCTCAAGTACA
hu. 7-C	211	GGGCCCCGAGCAGCAAGGCCCTACGACCCGGCAGCTCGACAGCGGAGACAACCCGTACCTCAAGTACA
hu. 61-C	211	GGGCCCCGAGCAGCAAGGCCCTACGACCCGGCAGCTCGACAGCGGAGACAACCCGTACCTCAAGTACA
rh. 56-C	211	GGGCCCCGAGCAGCAAGGCCCTACGACCCGGCAGCTCGACAGCGGAGACAACCCGTACCTCAAGTACA
hu. 9-C	211	GGGCCCCGAGCAGCAAGGCCCTACGACCCGGCAGCTCGACAGCGGAGACAACCCGTACCTCAAGTACA
hu. 54-C	211	GGGCTCTCGAGCAGCAAGGCCCTACGACCCGGCAGCTCGACAGCGGAGACAACCCGTACCTCAAGTACA
hu. 53-C	211	GGGCCCCGAGCAGCAAGGCCCTACGACCCGGCAGCTCGACAGCGGAGACAACCCGTACCTCAAGTACA
hu. 60-C	211	GGGCCCCGAGCAGCAAGGCCCTACGACCCGGCAGCTCGACAGCGGAGACAACCCGTACCTCAAGTACA
hu. 55-C	211	GGGCCCCGAGCAGCAAGGCCCTACGACCCGGCAGCTCGACAGCGGAGACAACCCGTACCTCAAGTACA
hu. 2-C	211	GGGCCCCGAGCAGCAAGGCCCTACGACCCGGCAGCTCGACAGCGGAGACAACCCGTACCTCAAGTACA
hu. 1-C	211	GGGCCCCGAGCAGCAAGGCCCTACGACCCGGCAGCTCGACAGCGGAGACAACCCGTACCTCAAGTACA
hu. 18-C	211	GGGCCCCGAGCAGCAAGGCCCTACGACCCGGCAGCTCGAAAGCGGAGACAACCCGTACCTCAAGTACA
hu. 3-C	211	GGGCCCCGAGCAGCAAGGCCCTACGACCCGGCAGCTCGACAGCGGAGACAACCCGTACCTCAAGTACA
hu. 25-C	211	GGGCCCCGAGCAGCAAGGCCCTACGACCCGGCAGCTCAACAGCGGAGACAACCCGTACCTCAAGTACA
hu. 15-C	211	GGGCCCCGAGCAGCAAGGCCCTACGACCCGGCAGCTCGACAGCGGAGACAACCCGTACCTCAAGTACA
hu. 16-C	211	GGGCCCCGAGCAGCAAGGCCCTACGACCCGGCAGCTCGACAGCGGAGACAACCCGTACCTCAAGTACA
hu. 11-C	211	GGGCCCCGAGCAGCAAGGCCCTACGACCCGGCAGCTCGACAGCGGAGACAACCCGTACCTCAAGTACA
hu. 10-C	211	GGGCCCCGAGCAGCAAGGCCCTACGACCCGGCAGCTCGACAGCGGAGACAACCCGTACCTCAAGTACA

FIG. 35

hu. 4-C	211	GCGGCCCTCGAGCAGCACAAGGCCCTACGACCCGGCAGCTCGACAGCGGAGACAACCCGTACCTCAAGTACA
rh. 54-D	211	GCGGCCCTCGAGCAGCACAAGGCCCTACGACCCAGCAGCTCAAAGCGGGTGACAAATCCGTACCTGCCGTATA
rh. 48-D	211	GCGGCCCTCGAGCAGCACAAGGCCCTACGACCCAGCAGCTCAAAGCGGGTGACAAATCCGTACCTGCCGTATA
rh. 55-D	211	GCGGCCCTCGAGCAGCACAAGGCCCTACGACCCAGCAGCTCAAAGCGGGTGACAAATCCGTACCTGCCGTATA
rh. 62-D	211	GCGGCCCTCGAGCAGCACAAGGCCCTACGACCCAGCAGCTCAAAGCGGGTGACAAATCCGTACCTGCCGTATA
AAV7-D	211	GCGGCCCTCGAGCAGCACAAGGCCCTACGACCCAGCAGCTCAAAGCGGGTGACAAATCCGTACCTGCCGTATA
rh. 52-E	211	GCGGCCCTCGAGCAGCACAAGGCCCTACGACCCAGCAGCTCAAAGCGGGTGACAAATCCGTACCTGCCGTATA
rh. 51-E	211	GCGGCCCTCGAGCAGCACAAGGCCCTACGACCCAGCAGCTCAAAGCGGGTGACAAATCCGTACCTGCCGTATA
hu. 39-E	211	GCGGCCCTCGAGCAGCACAAGGCCCTACGACCCAGCAGCTCAAAGCGGGTGACAAATCCGTACCTGCCGTATA
rh. 53-E	211	GCGGCCCTCGAGCAGCACAAGGCCCTACGACCCAGCAGCTCAAAGCGGGTGACAAATCCGTACCTGCCGTATA
hu. 37-E	211	GCGGCCCTCGAGCAGCACAAGGCCCTACGACCCAGCAGCTCAAAGCGGGTGACAAATCCGTACCTGCCGTATA
rh. 43-E	211	GCGGCCCTCGAGCAGCACAAGGCCCTACGACCCAGCAGCTCAAAGCGGGTGACAAATCCGTACCTGCCGTATA
rh. 50-E	211	GCGGCCCTCGAGCAGCACAAGGCCCTACGACCCAGCAGCTCAAAGCGGGTGACAAATCCGTACCTGCCGTATA
rh. 49-E	211	GCGGCCCTCGAGCAGCACAAGGCCCTACGACCCAGCAGCTCAAAGCGGGTGACAAATCCGTACCTGCCGTATA
rh. 61-E	211	GCGGCCCTCGAGCAGCACAAGGCCCTACGACCCAGCAGCTCAAAGCGGGTGACAAATCCGTACCTGCCGTATA
hu. 41-E	211	GCGGCCCTCGAGCAGCACAAGGCCCTACGACCCAGCAGCTCAAAGCGGGTGACAAATCCGTACCTGCCGTATA
rh. 64-E	211	GCGGCCCTCGAGCAGCACAAGGCCCTACGACCCAGCAGCTCAAAGCGGGTGACAAATCCGTACCTGCCGTATA
hu. 42-E	211	GCGGCCCTCGAGCAGCACAAGGCCCTACGACCCAGCAGCTCAAAGCGGGTGACAAATCCGTACCTGCCGTATA
rh. 57-E	211	GCGGCCCTCGAGCAGCACAAGGCCCTACGACCCAGCAGCTCAAAGCGGGTGACAAATCCGTACCTGCCGTATA
hu. 40-E	211	GCGGCCCTCGAGCAGCACAAGGCCCTACGACCCAGCAGCTCAAAGCGGGTGACAAATCCGTACCTGCCGTATA
AAV8-E	211	GCGGCCCTCGAGCAGCACAAGGCCCTACGACCCAGCAGCTCAAAGCGGGTGACAAATCCGTACCTGCCGTATA
rh. 58-E	211	GCGGCCCTCGAGCAGCACAAGGCCCTACGACCCAGCAGCTCAAAGCGGGTGACAAATCCGTACCTGCCGTATA
rh. 40-E	211	GCGGCCCTCGAGCAGCACAAGGCCCTACGACCCAGCAGCTCAAAGCGGGTGACAAATCCGTACCTGCCGTATA
hu. 67-E	211	GCGGCCCTCGAGCAGCACAAGGCCCTACGACCCAGCAGCTCAAAGCGGGTGACAAATCCGTACCTGCCGTATA
hu. 17-E	211	GCGGCCCTCGAGCAGCACAAGGCCCTACGACCCAGCAGCTCAAAGCGGGTGACAAATCCGTACCTGCCGTATA
hu. 6-E	211	GCGGCCCTCGAGCAGCACAAGGCCCTACGACCCAGCAGCTCAAAGCGGGTGACAAATCCGTACCTGCCGTATA
hu. 66-E	211	GCGGCCCTCGAGCAGCACAAGGCCCTACGACCCAGCAGCTCAAAGCGGGTGACAAATCCGTACCTGCCGTATA
rh. 38-E	211	GCGGCCCTCGAGCAGCACAAGGCCCTACGACCCAGCAGCTCAAAGCGGGTGACAAATCCGTACCTGCCGTATA
hu. 32-F	211	GCGGCCCTCGAGCAGCACAAGGCCCTACGACCCAGCAGCTCAAAGCGGGTGACAAATCCGTACCTGCCGTATA
AAV9/hu	211	GCGGCCCTCGAGCAGCACAAGGCCCTACGACCCAGCAGCTCAAAGCGGGTGACAAATCCGTACCTGCCGTATA

FIG. 3K

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hu.31-F	211	GGGGCCCTCGAGCACGACAAGGCCTACGACCAGCAGCTCAAGGCCGGAGACAAACCCGTACCTCAAGTACA	290	300	310	320	330	340	350
AAV5	278							
AAV3-3	281	ACCACGGGACGCCGAGTTTCAGGAGAAGCTCGCCGACGACACATCCTTCGGGGGAAACCTCGGAAAGGC							
AAV4-4	278	ACCACGCCGACGCCGAGTTTCAGGAGCGTCTTCAAGAAGATACGTCTTTTGGGGGCAACCTTGGCAGAGC							
AAV1-A	281	ACCACGCCGACGCCGAGTTTCAGCAGCGGCTTCAGGGCGACACATCGTTTGGGGCAACCTCGGCAGAGC							
hu.46-A	281	ACCACGCCGACGCCGAGTTTCAGGAGCGTCTGCAAGAAGATACGTCTTTTGGGGCAACCTCGGGCGAGC							
hu.48-A	281	ACCACGCCGACGCCGAGTTTCAGGAGCGCTTAAAGAAGATACGTCTTTTGGGGCAACCTCGGGCGGAGC							
hu.44-A	281	ACCACGCCGACGCCGAGTTTCAGGAGCGCTTAAAGAAGATACGTCTTTTGGGGCAACCTCGGGCGAGC							
hu.43-A	281	ACCACGCCGACGCCGAGTTTCAGGAGCGTCTGCAAGAAGATACGTCTTTTGGGGCAACCTCGGGCGAGC							
AAV6-A	281	ACCACGCCGACGCCGAGTTTCAGGAGCGTCTGCAAGAAGATACGTCTTTTGGGGCAACCTCGGGCGAGC							
hu.34-B	281	ACCACGCCGACGCCGAGTTTCAGGAGCGCTTAAAGAAGATACGTCTTTTGGGGCAACCTCGGACGAGC							
hu.47-B	281	ACCACGCCGACGCCGAGTTTCAGGAGCGCTTAAAGAAGATACGTCTTTTGGGGCAACCTCGGACGAGC							
hu.29-B	281	ACCACGCCGACGCCGAGTTTCAGGAGCGCTTAAAGAAGATACGTCTTTTGGGGCAACCTCGGACGAGC							
hu.63-B	281	ACCACGCCGACGCCGAGTTTCAGGAGCGCTTAAAGAAGATACGTCTTTTGGGGCAACCTCGGACGAGC							
hu.56-B	281	ACCACGCCGACGCCGAGTTTCAGGAGCGCTTAAAGAAGATACGTCTTTTGGGGCAACCTCGGACGAGC							
hu.45-B	281	ACCACGCCGACGCCGAGTTTCAGGAGCGCTTAAAGAAGATACGTCTTTTGGGGCAACCTCGGACGAGC							
hu.57-B	278	ACCACGCCGACGCCGAGTTTCAGGAGCGCTTAAAGAAGATACGTCTTTTGGGGCAACCTCGGACGAGC							
hu.35-B	281	ACCACGCCGACGCCGAGTTTCAGGAGCGCTTAAAGAAGATACGTCTTTTGGGGCAACCTCGGACGAGC							
hu.58-B	281	ACCACGCCGACGCCGAGTTTCAGGAGCGCTTAAAGAAGATACGTCTTTTGGGGCAACCTCGGACGAGC							
hu.28-B	281	ACCACGCCGACGCCGAGTTTCAGGAGCGCTTAAAGAAGATACGTCTTTTGGGGCAACCTCGGACGAGC							
hu.51-B	281	ACCACGCCGACGCCGAGTTTCAGGAGCGCTTAAAGAAGATACGTCTTTTGGGGCAACCTCGGACGAGC							
hu.19-B	281	ACCACGCCGACGCCGAGTTTCAGGAGCGCTTAAAGAAGATACGTCTTTTGGGGCAACCTCGGACGAGC							
hu.49-B	281	ACCACGCCGACGCCGAGTTTCAGGAGCGCTTAAAGAAGATACGTCTTTTGGGGCAACCTCGGACGAGC							
hu.52-B	281	ACCACGCCGACGCCGAGTTTCAGGAGCGCTTAAAGAAGATACGTCTTTTGGGGCAACCTCGGACGAGC							
hu.13-B	281	ACCACGCCGACGCCGAGTTTCAGGAGCGCTTAAAGAAGATACGTCTTTTGGGGCAACCTCGGACGAGC							
AAV2-B	281	ACCACGCCGACGCCGAGTTTCAGGAGCGCTTAAAGAAGATACGTCTTTTGGGGCAACCTCGGACGAGC							
hu.20-B	281	ACCACGTGACGCCGAGTTTCAGGAGCGTCTTAAAGAAGATACGTCTTTTGGGGCAACCTCGGACGAGC							

FIG. 31

hu. 24-B	281	ACCACGCCGACGCGGAGTTTCAGGAGCGCCTTAAAGAGGATACGTCCTTTTGGGGGCAACCTCGGACGAGC
hu. 64-B	281	ACCACGCCGACGCGGAGTTCCAGGAGCGTCTTAAAGAAGATACGTCCTTTTGGGGGCAACCTCGGACGAGC
hu. 27-B	281	ACCACGCCGACGCGGAGTTTCAGGAGCGTCTTAAAGAAGATACGTCCTTTTGGGGGCAACCTCGGACGAGC
hu. 21-B	281	ACCACGCCGACGCGGAGTTTCAGGAGCGCCTTAAAGAGGATACGTCCTTTTGGGGGCAACCTCGGACGAGC
hu. 22-B	281	ACCACGCCGACGCGGAGTTTCAGGAGCGCCTTAAAGGAGATACGTCCTTTTGGGGGCAACCTCGGACGAGC
hu. 23-B	281	ACCACGCCGACGCGGAGTTTCAGGAGCGTCTTAAAGAAGATACGTCCTTTTGGGGGCAACCTCGGACGAGC
hu. 7-C	281	ACCACGCCGACGCGGAGTTTCAGGAGCGTCTTAAAGAAGATACGTCCTTTTGGGGGCAACCTCGGACGAGC
hu. 61-C	281	ACCACGCCGACGCGGAGTTTCAGGAGCGCCTTAAAGAAGATACGTCCTTTTGGGGGCAACCTCGGACGAGC
rh. 56-C	281	ACCACGCCGACGCGGAGTTTCAGGAGCGTCTTAAAGAAGATACGTCCTTTTGGGGGCAACCTCGGACGAGC
hu. 9-C	281	ACCACGCCGACGCGGAGTTTCAGGAGCGTCTTAAAGAAGATACGTCCTTTTGGGGGCAACCTCGGACGAGC
hu. 54-C	281	ACCACGCCGACGCGGAGTTTCAGGAGCGTCTTAAAGAAGATACGTCCTTTTGGGGGCAACCTCGGACGAGC
hu. 53-C	281	ACCACGCCGACGCGGAGTTTCAGGAGCGCCTTAAAGAAGATACGTCCTTTTGGGGGCAACCTCGGACGAGC
hu. 60-C	281	ACCACGCCGACGCGGAGTTTCAGGAGCGCCTTAAAGAAGATACGTCCTTTTGGGGGCAACCTCGGACGAGC
hu. 55-C	281	ACCACGCCGACGCGGAGTTTCAGGAGCGTCTTAAAGAAGATACGTCCTTTTGGGGGCAACCTCGGACGAGC
hu. 2-C	281	ACCACGCCGACGCGAGAGTTTCAGGAGCGCCTTAAAGAAGATACGTCCTTTTGGGGGCAACCTCGGACGAGC
hu. 1-C	281	ACCACGCCGACGCGAGAGTTTCAGGAGCGCCTTAAAGAAGATACGTCCTTTTGGGGGCAACCTCGGACGAGC
hu. 18-C	281	ACCACGCCGACGCGGAGTTTCAGGAGCGTCTTAAAGAAGATACGTCCTTTTGGGGGCAACCTCGGACGAGC
hu. 3-C	281	ACCACGCCGACGCGAGAGTTTCAGGAGCGCCTTAAAGAAGATACGTCCTTTTGGGGGCAACCTCGGACGAGC
hu. 25-C	281	ACCACGCCGACGCGGAGTTTCAGGAGCGCCTTAAAGAAGATACGTCCTTTTGGGGGCAACCTCGGACGAGC
hu. 15-C	281	ACCACGCCGACGCGGAGTTTCAGGAGCGCCTTAAAGAAGATACGTCCTTTTGGGGGCAACCTCGGACGAGC
hu. 16-C	281	ACCACGCCGCGCGGAGTTTCAGGAGCGCCTTAAAGAAGATACGTCCTTTTGGGGGCAACCTCGGACGAGC
hu. 11-C	281	ACCACGCCGACGCGGAGTTTCAGGAGCGTCTTAAAGAAGATACGTCCTTTTGGGGGCAACCTCGGACGAGC
hu. 10-C	281	ACCACGCCGACGCGGAGTTTCAGGAGCGTCTTAAAGAAGATACGTCCTTTTGGGGGCAACCTCGGACGAGC
hu. 4-C	281	ACCACGCCGACGCGAGAGTTTCAGGAGCGCCTTAAAGAAGATACGTCCTTTTGGGGGCAACCTCGGACGAGC
rh. 54-D	281	ACCACGCCGACGCGGAGTTTCAGGAGCGTCTGCAAGAAGATACGTCCTTTTGGGGGCAACCTCGGACGAGC
rh. 48-D	281	ACCACGCCGACGCGGAGTTTCAGGAGCGTCTGCAAGAAGATACGTCCTTTTGGGGGCAACCTCGGACGAGC
rh. 55-D	281	ATCAGGCCGACGCGGAGTTTCAGGAGCGTCTGCAAGAAGATACGTCCTTTTGGGGGCAACCTCGGACGAGC
rh. 62-D	281	ACCACGCCGACGCGGAGTTTCAGGAGCGTCTGCAAGAAGATACGTCCTTTTGGGGGCAACCTCGGACGAGC
AAV7-D	281	ACCACGCCGACGCGGAGTTTCAGGAGCGTCTGCAAGAAGATACGTCCTTTTGGGGGCAACCTCGGACGAGC
rh. 52-E	281	ATCAGGCCGACGCGGAGTTTCAGGAGCGTCTGCAAGAAGATACGTCCTTTTGGGGGCAACCTCGGACGAGC

rh. 51-E	281	ATCAGCCGACGCCGAGCTTCAGGAGCGTCTGCAAGAAGATACGTCTTTTGGGGGCAACCTCGGGCGAGC	360	370	380	390	400	410	420
hu. 39-E	281	ATCAGCCGACGCCGAGTTTCAGGAGCGTCTGCAAGAAGATACGTCTTTTGGGGGCAACCTCGGGCGAGC							
rh. 53-E	281	ATCAGCCGACGCCGAGTTTCAGGAGCGTCTGCAAGAAGATACGTCTTTTGGGGGCAACCTCGGGCGAGC							
hu. 37-E	281	ACCAGCCGACGCCGAGTTTCAGGAGCGTCTGCAAGAAGATACGTCTTTTGGGGGCAACCTCGGGCGAGC							
rh. 43-E	281	ACCAGCCGACGCCGAGTTTCAGGAGCGTCTGCAAGAAGATACGTCTTTTGGGGGCAACCTCGGGCGAGC							
rh. 50-E	281	ATCAGCCGACGCCGAGTTTCAGGAGCGTCTGCAAGAAGATACGTCTTTTGGGGGCAACCTCGGGCGAGC							
rh. 49-E	281	ATCAGCCGACGCCGAGTTTCAGGAGCGTCTGCAAGAAGATACGTCTTTTGGGGGCAACCTCGGGCGAGC							
rh. 61-E	281	ATCAGCCGACGCCGAGTTTCAGGAGCGTCTGCAAGAAGATACGTCTTTTGGGGGCAACCTCGGGCGAGC							
hu. 41-E	281	ACCAGCCGACGCCGAGTTTCAGGAGCGTCTGCAAGAAGATACGTCTTTTGGGGGCAACCTCGGGCGAGC							
rh. 64-E	281	ATCAGCCGACGCCGAGTTTCAGGAGCGTCTGCAAGAAGATACGTCTTTTGGGGGCAACCTCGGGCGAGC							
hu. 42-E	281	ACCAGCCGACGCCGAGTTTCAGGAGCGTCTGCAAGAAGATACGTCTTTTGGGGGCAACCTCGGGCGAGC							
rh. 57-E	281	ATCAGCCGACGCCGAGTTTCAGGAGCGTCTGCAAGAAGATACGTCTTTTGGGGGCAACCTCGGGCGAGC							
hu. 40-E	281	ACCAGCCGACGCCGAGTTTCAGGAGCGTCTGCAAGAAGATACGTCTTTTGGGGGCAACCTCGGGCGAGC							
AAV8-E	281	ACCAGCCGACGCCGAGTTTCAGGAGCGTCTGCAAGAAGATACGTCTTTTGGGGGCAACCTCGGGCGAGC							
rh. 58-E	281	ATCAGCCGACGCCGAGTTTCAGGAGCGTCTGCAAGAAGATACGTCTTTTGGGGGCAACCTCGGGCGAGC							
rh. 40-E	281	ACCAGCCGACGCCGAGTTTCAGGAGCGTCTGCAAGAAGATACGTCTTTTGGGGGCAACCTCGGGCGAGC							
hu. 67-E	281	ACCAGCCGACGCCGAGTTTCAGGAGCGTCTGCAAGAAGATACGTCTTTTGGGGGCAACCTCGGGCGAGC							
hu. 17-E	281	ACCAGCCGACGCCGAGTTTCAGGAGCGTCTGCAAGAAGATACGTCTTTTGGGGGCAACCTCGGGCGAGC							
hu. 6-E	281	ACCAGCCGACGCCGAGTTTCAGGAGCGTCTGCAAGAAGATACGTCTTTTGGGGGCAACCTCGGGCGAGC							
hu. 66-E	281	ACCAGCCGACGCCGAGTTTCAGGAGCGTCTGCAAGAAGATACGTCTTTTGGGGGCAACCTCGGGCGAGC							
rh. 38-E	281	ACCAGCCGACGCCGAGTTTCAGGAGCGTCTGCAAGAAGATACGTCTTTTGGGGGCAACCTCGGGCGAGC							
hu. 32-F	281	ACCAGCCGACGCCGAGTTTCAGGAGCGGCTCAAAGAAGATACGTCTTTTGGGGGCAACCTCGGGCGAGC							
AAV9/hu	281	ACCAGCCGACGCCGAGTTTCAGGAGCGGCTCAAAGAAGATACGTCTTTTGGGGGCAACCTCGGGCGAGC							
hu. 31-F	281	ACCAGCCGACGCCGAGTTTCAGGAGCGGCTCAAAGAAGATACGTCTTTTGGGGGCAACCTCGGGCGAGC							
AAV5	348							
AAV3-3	351	AGTCTTTCAGGCCCAAGAAAGGGTTCTCGAACCTTTTGGC---CTGGTTGAAGAGGGTGCTAAGACGGCC							
AAV4-4	348	AGTCTTTCAGGCCCAAGAAAGAGGATCCTTGAGCCCTCTTGGT---CTGGTTGAGGAAGCAGCTAAACGGCT							

FIG. 3N

AAV1-A	351	AGTCTTCCAGGCCAAGAAGCGGGTTCTCGAACCTCTCGGT---
hu.46-A	351	AGTCTTCCAGGCCAAGAAGCGGGTTCTCGAACCTCTCGGT---
hu.48-A	351	AGTCTTCCAGGCCAAGAAGCGGGTTCTCGAACCTCTCGGT---
hu.44-A	351	AGTCTTCCAGGCCAAGAAGCGGGTTCTCGAACCTCTCGGT---
hu.43-A	351	AGTCTTCCAGGCCAAGAAGCGGGTTCTCGAACCTCTCGGT---
AAV6-A	351	AGTCTTCCAGGCCAAGAAGCGGGTTCTCGAACCTTTTGGT---
hu.34-B	351	AGTCTTCCAGGCCAAGAAGCGGGTTCTCGAACCTCTGGGC---
hu.47-B	351	AGTCTTCCAGGCCAAGAAGCGGGTTCTCGAACCTCTGGGC---
hu.29-B	351	AGTCTTCCAGGCCAAGAAGCGGGTTCTCGAACCTCTGGGC---
hu.63-B	351	AGTCTTCCAGGCCAAGAAGCGGGTTCTCGAACCTCTGGGC---
hu.56-B	351	AGTCTTCCAGGCCAAGAAGCGGGTTCTCGAACCTCTGGGC---
hu.45-B	351	AGTCTTCCAGGCCAAGAAGCGGGTTCTCGAACCTCTGGGC---
hu.57-B	348	AGTCTTCCAGGCCAAGAAGCGGGTTCTCGAACCTCTGGGC---
hu.35-B	351	AGTCTTCCAGGCCAAGAAGCGGGTTCTCGAACCTCTGGGC---
hu.58-B	351	AGTCTTCCAGGCCAAGAAGCGGGTTCTCGAACCTCTGGGC---
hu.28-B	351	AGTCTTCCAGGCCAAGAAGCGGGTTCTCGAACCTCTGAGC---
hu.51-B	351	AGTCTTCCAGGCCAAGAAGCGGGTTCTCGAACCTCTGGGC---
hu.19-B	351	AGTCTTCCAGGCCAAGAAGCGGGTTCTCGAACCTCTGGGC---
hu.49-B	351	AGTCTTCCAGGCCAAGAAGCGGGTTCTCGAACCTCTGGGC---
hu.52-B	351	AGTCTTCCAGGCCAAGAAGCGGGTTCTCGAACCTCTGGGC---
hu.13-B	351	AGTCTTCCAGGCCAAGAAGCGGGTTCTCGAACCTCTGGGC---
AAV2-B	351	AGTCTTCCAGGCCAAGAAGCGGGTTCTCGAACCTCTGGGC---
hu.20-B	351	AGTCTTCCAGGCCAAGAAGCGGGTTCTCGAACCTCTGGGC---
hu.24-B	351	AGTCTTCCAGGCCAAGAAGCGGGTTCTCGAACCTCTGGGC---
hu.64-B	351	AGTCTTCCAGGCCAAGAAGCGGGTTCTCGAACCTCTGGGC---
hu.27-B	351	AGTCTTCCAGGCCAAGAAGCGGGTTCTCGAACCTCTGGGC---
hu.21-B	351	AGTCTTCCAGGCCAAGAAGCGGGTTCTCGAACCTCTGGGC---
hu.22-B	351	AGTCTTCCAGGCCAAGAAGCGGGTTCTCGAACCTCTGGGC---
hu.23-B	351	AGTCTTCCAGGCCAAGAAGCGGGTTCTCGAACCTCTGGGC---
hu.7-C	351	AGTCTTCCAGGCCAAGAAGCGGGTTCTCGAACCTCTGGGC---

hu. 61-C 351 AGTCTTCCAGGCAAAAAGAGGGTTCTTGAACCTCTGGGC---CTGGTTGAGGAACCTGTTAAACGGCT
 rh. 56-C 351 AGTCTTCCAGGCAAAAAGAGGGTTCTTGAACCTCTGGGC---CTGGTTGAGGAACCTGTTAAGACGGCT
 hu. 9-C 351 AGTCTTCCAGGCAAAAAGAGGGTTCTTGAACCTCTGGGC---CTGGTTGAGGAACCTGTTAAGACGGCT
 hu. 54-C 351 AGTCTTCCAGGCAAAAAGAGGGTTCTTGAACCTCTGGGC---CTGGTTGAGGAACCTGTTAAGACGGCT
 hu. 53-C 351 AGTCTTCCAGGCAAAAAGAGGGTTCTTGAACCTCTGGGC---CTGGTTGAGGAACCTGTTAAGACGGCT
 hu. 60-C 351 AGTCTTCCAGGCAAAAAGAGGGTTCTTGAACCTCTGGGC---CTGGTTGAGGAACCTGTTAAGACGGCT
 hu. 55-C 351 AGTCTTCCAGGCAAAAAGAGGGTTCTTGAACCTCTGGGC---CTGGTTGAGGAACCTGTTAAGACGGCT
 hu. 2-C 351 AGTCTTCCAGGCAAAAAGAGGGTTCTTGAACCTCTGGGC---CTGGTTGAGGAACCTGTTAAGACGGCT
 hu. 1-C 351 AGTCTTCCAGGCAAAAAGAGGGTTCTTGAACCTCTGGGC---CTGGTTGAGGAACCTGTTAAGACGGCT
 hu. 18-C 351 AGTCTTCCAGGCAAAAAGAGGGTTCTTGAACCTCTGGGC---CTGGTTGAGGAACCTGTTAAGACGGCT
 hu. 3-C 351 AGTCTTCCAGGCAAAAAGAGGGTTCTTGAACCTCTGGGC---CTGGTTGAGGAACCTGTTAAGACGGCT
 hu. 25-C 351 AGTCTTCCAGGCAAAAAGAGGGTTCTTGAACCTCTGGGC---CTGGTTGAGGAACCTGTTAAGACGGCT
 hu. 15-C 351 AGTCTTCCAGGCAAAAAGAGGGTTCTTGAACCTCTGGGC---CTGGTTGAGGAACCTGTTAAGACGGCT
 hu. 16-C 351 AGTCTTCCAGGCAAAAAGAGGGTTCTTGAACCTCTGGGC---CTGGTTGAGGAACCTGTTAAGACGGCT
 hu. 11-C 351 AGTCTTCCAGGCAAAAAGAGGGTTCTTGAACCTCTGGGC---CTGGTTGAGGAACCTGTTAAGACGGCT
 hu. 10-C 351 AGTCTTCCAGGCAAAAAGAGGGTTCTTGAACCTCTGGGC---CTGGTTGAGGAACCTGTTAAGACGGCT
 hu. 4-C 351 AGTCTTCCAGGCAAAAAGAGGGTTCTTGAACCTCTGGGC---CTGGTTGAGGAACCTGTTAAGACGGCT
 rh. 54-D 351 AGTCTTCCAGGCCAAGAGCGGGTTCTCGAACCTCTCGGT---CTGGTTGAGGAACCTGTTAAGACGGCT
 rh. 48-D 351 AGTCTTCCAGGCCAAGAGCGGGTTCTCGAACCTCTCGGT---CTGGTTGAGGAACCTGTTAAGACGGCT
 rh. 55-D 351 AGTCTTCCAGGCCAAGAGCGGGTTCTCGAACCTCTCGGT---CTGGTTGAGGAACCTGTTAAGACGGCT
 rh. 62-D 351 AGTCTTCCAGGCCAAGAGCGGGTTCTCGAACCTCTCGGT---CTGGTTGAGGAACCTGTTAAGACGGCT
 AAV7-D 351 AGTCTTCCAGGCCAAGAGCGGGTTCTCGAACCTCTCGGT---CTGGTTGAGGAACCTGTTAAGACGGCT
 rh. 52-E 351 AGTCTTCCAGGCCAAGAGCGGGTTCTCGAACCTCTCGGT---CTGGTTGAGGAACCTGTTAAGACGGCT
 rh. 51-E 351 AGTCTTCCAGGCCAAGAGCGGGTTCTCGAACCTCTCGGT---CTGGTTGAGGAACCTGTTAAGACGGCT
 hu. 39-E 351 AGTCTTCCAGGCCAAGAGCGGGTTCTCGAACCTCTCGGT---CTGGTTGAGGAACCTGTTAAGACGGCT
 rh. 53-E 351 AGTCTTCCAGGCCAAGAGCGGGTTCTCGAACCTCTCGGT---CTGGTTGAGGAACCTGTTAAGACGGCT
 hu. 37-E 351 AGTCTTCCAGGCCAAGAGCGGGTTCTCGAACCTCTCGGT---CTGGTTGAGGAACCTGTTAAGACGGCT
 rh. 43-E 351 AGTCTTCCAGGCCAAGAGCGGGTTCTCGAACCTCTCGGT---CTGGTTGAGGAACCTGTTAAGACGGCT
 rh. 50-E 351 AGTCTTCCAGGCCAAGAGCGGGTTCTCGAACCTCTCGGT---CTGGTTGAGGAACCTGTTAAGACGGCT
 rh. 49-E 351 AGTCTTCCAGGCCAAGAGCGGGTTCTCGAACCTCTCGGT---CTGGTTGAGGAACCTGTTAAGACGGCT

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rh. 61-E	351	AGTCTTCCAGGCCAAGAAGCGGGTTCTCGAACCTCTCGGT---	CTGGTTGAGGAAGGCGCTAAGACGGCT	430	440	450	460	470	480	490	
hu. 41-E	351	AGTCTTCCAGGCCAAGAAGCGGGTTCTCGAACCTCTCGGT---	CCGTTGAGGAAGCTGCTAAGACGGCT									
rh. 64-E	351	AGTCTTCCAGGCCAAGAAGCGGGTTCTCGAACCTCTCGGT---	CTGGTTGAGGAAGGCGCTAAGACGGCT									
hu. 42-E	351	AGTCTTCCAGGCCAAGAAGCGGGTTCTCGAACCTCTCGGT---	CTGGTTGAGGAAGGCGCTAAGACGGCT									
rh. 57-E	351	AGTCTTCCAGGCCAAGAAGCGGGTTCTCGAACCTCTCGGT---	CTGGTTGAGGAAGGCGCTAAGACGGCT									
hu. 40-E	351	AGTCTTCCAGGCCAAGAAGCGGGTTCTCGAACCTCTCGGT---	CTGGTTGAGGAAGCTGCTAAGACGGCT									
AAV8-E	351	AGTCTTCCAGGCCAAGAAGCGGGTTCTCGAACCTCTCGGT---	CTGGTTGAGGAAGGCGCTAAGACGGCT									
rh. 58-E	351	AGTCTTCCAGGCCAAGAAGCGGGTTCTCGAACCTCTCGGT---	CTGGTTGAGGAAGCTGCTAAGACGGCT									
rh. 40-E	351	AGTCTTCCAGGCCAAGAAGCGGGTTCTCGAACCTCTCGGT---	CTGGTTGAGGAAGCTGCTAAGACGGCT									
hu. 67-E	351	AGTCTTCCAGGCCAAGAAGCGGGTTCTCGAACCTCTCGGT---	CTGGTTGAGGAAGCTGCTAAGACGGCT									
hu. 17-E	351	AGTCTTCCAGGCCAAGAAGCGGGTTCTCGAACCTCTCGGT---	CTGGTTGAGGAAGGCGCTAAGACGGCT									
hu. 6-E	351	AGTCTTCCAGGCCAAGAAGCGGGTTCTCGAACCTCTCGGT---	CTGGTTGAGGAAGGCGCTAAGACGGCT									
hu. 66-E	351	AGTCTTCCAGGCCAAGAAGCGGGTTCTCGAACCTCTCGGT---	CTGGTTGAGGAAGCTGCTAAGACGGCT									
rh. 38-E	351	AGTCTTCCAGGCCAAGAAGCGGGTTCTCGAACCTCTCGGT---	CTGGTTGAGGAAGCTGCTAAGACGGCT									
hu. 32-F	351	AGTCTTCCAGGCCAAGAAAGAGGCTTCTTGAACCTCTTGGT---	CTGGTTGAGGAAGGCGCTAAGACGGCT									
AAV9/hu	351	AGTCTTCCAGGCCAAGAAAGAGGCTTCTTGAACCTCTTGGT---	CTGGTTGAGGAAGGCGCTAAGACGGCT									
hu. 31-F	351	AGTCTTCCAGGCCAAGAAAGAGGCTTCTTGAACCTCTTGGT---	CTGGTTGAGGAAGGCGCTAAGACGGCT									
AAV5	415	CCTACCGGAAAGCGGATAGACGACCACCTTCCA-----	-----AAAA									
AAV3-3	418	CCTGGAAGAAGGGGCTGTAGATCAGTCTCCTCAG---	GAACCGGACTCATCTGGTGTGGCAAAT									
AAV4-4	415	CCTGGAAGAAGAGACCGTTGATTGAATCCCCCAG---	CAGCCCGACTCCTCCACGGGTATCGGCAAAA									
AAV1-A	418	CCTGGAAGAAGAACGTCGGTAGAGCAGTCGCCACAA---	GAGCCAGACTCCTCCTCGGSCATCGGCAAGA									
hu. 46-A	418	CCTGGAAGAAGAACGTCGGTAGAGCAGTCGCCACAA---	GAGCCAGACTCCCCCTCGGSCATCGGCAAGA									
hu. 48-A	418	CCTGGAAGAAGAACGTCGGTAGAGCAGTCGCCACAA---	GAGCCAGACTCCTCCTCGGSCATCGGCAAGA									
hu. 44-A	418	CCTGGAAGAAGAACGTCGGTAGAGCAGTCGCCACAA---	GGGCCAGACTCCTCCTCGGSCATCGGCAAGA									
hu. 43-A	418	CCTGGAAGAAGAGACCGGTAGAACCGTCACTCAGCGTTCC	CCCCGACTCCTCCACGGGCATCGGCAAGA									
AAV6-A	418	CCTGGAAGAAGAACGTCGGTAGAGCAGTCGCCACAA---	GAGCCAGACTCCTCCTCGGSCATCGGCAAGA									
hu. 34-B	418	CCGGGAAAAAAGAGCGGCTAGAGCACTCTCCTGTG---	GAGCCAGACTCCTCCTCGGGAACCGGAAAGG									

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hu. 47-B 418 CCGGAAAAAAGAGCCGGTAGAGCACTCTCCTGTG---GAGCCAGACTCCTCCTCGGGAACCGGAAAAGG
 hu. 29-B 418 CCGGAAAAAAGAGCCGGTAGAGCACTCTCCTGCA---GAGCCAGATTCTCCTCCGGAACCGGAAAAGT
 hu. 63-B 418 CCGGAAAAAAGAGCCGGTAGAGCACTCTCCTGCG---GAGCCAGACTCCTCCTCGGGAACCGGAAAAG
 hu. 56-B 418 CCGGAAAAAAGAGCCGGTAGAGCACTCTCCTGTG---GAGCCAGACTCCTCCTCGGGAACCGGAAAAG
 hu. 45-B 418 CCGGAAAAAAGAGCCGGTAGAGCACTCTCCTGTG---GAGCCAGACTCCTCCTCGGGAACCGGAAAAGG
 hu. 57-B 415 CCGGAAAAAAGAGCCGGTAGAGCACTCTCCTGTG---GAGCCAGACTCCTCCTCGGGAACCGGAAAAG
 hu. 35-B 418 CCGGAAAAAAGAGCCGGTAGAGCACTCTCCTGTG---GAGCCAGACTCCTCCTCGGGAACCGGAAAAGG
 hu. 58-B 418 CCGGAAAAAAGAGCCGGTAGAGCACTCTCCTGTG---GAGCCAGACTCCTCCTCGGGAACCGGAAAAG
 hu. 28-B 418 CCGGAAAAAAGAGCCGGTAGAGCACTCTCCGCA---GAGCCAGATTCTCCTCCGGAACCGGAAAAGT
 hu. 51-B 418 CCAGAAAAAAGAGCCGGTAGAGCACTCTCCTGTG---GAGCCAGACTCCTCCTCGGGAACCGGAAAAGG
 hu. 19-B 418 CCGGAGAAAAAGAGCCGGTAGAGCACTCTCCTGCG---GAGCCAGACTCCTCCTCGGGAACCGGAAAAG
 hu. 49-B 418 CCGGAAAAAAGAGCCGGTAGAGCACTCTCCTGTG---GAGCCAGACTCCTCCTCGGGAACAGGAAAAG
 hu. 52-B 418 CCGGAAAAAAGAGCCGGTAGAGCACTCTCCTGTG---GAGCCAGACTCCTCCTCGGGAACCGGAAAAGG
 hu. 13-B 418 CCGGAAAAAAGAGCCGGTAGAGCACTCTCCTGCG---GAGCCAGACTCCTCCTCGGGAACCGGAAAAG
 AAV2-B 418 CCGGAAAAAAGAGCCGGTAGAGCACTCTCCTGTG---GAGCCAGACTCCTCCTCGGGAACCGGAAAAGG
 hu. 20-B 418 CCGGAGAAAAAGAGCCGGTAGAGCACTCTCCTGCG---GAGCCAGACTCCTCCTCGGGAACCGGAAAAG
 hu. 24-B 418 CCGGAAAAAAGAGCCGGTAGAGCACTCTCCTGCG---GAGCCAGACTCCTCCTCGGGAACCGGAAAAG
 hu. 64-B 418 CCGGAAAAAAGAGCCGGTAGAGCACTCTCTTGTG---GAGCCAGACTCCTCCTCGGGAACCGGAAAAG
 hu. 27-B 418 CCGGAAAAAAGAGCCGGTAGAGCACTCTCCTGCG---GAGCCAGACTCCTCCTCGGGAACCGGAAAAG
 hu. 21-B 418 CCGGAAAAAAGAGCCGGTAGAGCACTCTCCTGCG---GAGCCAGACTCCTCCTCGGGAACCGGAAAAG
 hu. 22-B 418 CCGGAAAAAAGAGCCGGTAGAGCACTCTCCTGCG---GAGCCAGACTCCTCCTCGGGAACCGGAAAAG
 hu. 23-B 418 CCGGAAAAAAGAGCCGGTAGAGCACTCTCCTGCG---GAGCCAGACTCCTCCTCGGGAACCGGAAAAG
 hu. 7-C 418 CCGGAAAAAAGAGCCGGTAGAGCACTCTCCTGCG---GAGCCAGACTCCTCCTCGGGAACCGGAAAAG
 hu. 61-C 418 CCGGAAAAAAGAGCCGGTAGAGCACTCTCCTGTG---GAGCCAGACTCCTCCTCGGGAACCGGAAAAG
 rh. 56-C 418 CCGGAAAAAAGAGCCGGTAGAGCACTCTCCTGCG---GAGCCAGACTCCTCCTCGGGAACCGGAAAAG
 hu. 9-C 418 CCGGAAAAAAGAGCCGGTAGAGCACTCTCCTGTG---GAGCCAGACTCCTCCTCGGGAACCGGAAAAG
 hu. 54-C 418 CCGGAAAAAAGAGCCGGTAGAGCACTCTCCTGCG---GAGCCAGACTCCTCCTCGGGAACCGGAAAAG
 hu. 53-C 418 CCGGAAAAAAGAGCCGGTAGAGCACTCTCCTGCG---GAGCCAGACTCCTCCTCGGGAACCGGAAAAG
 hu. 60-C 418 CCGGAAAAAAGAGCCGGTAGAGCACTCTCCTGTG---GAGCCAGACTCCTCCTCGGGAACCGGAAAAG
 hu. 55-C 418 CCGGAAAAAAGAGCCGGTAGAGCACTCTCCTGCG---GAGCCAGACTCCTCCTCGGGAACCGGAAAAG

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hu.2-C	418	CCGGGAAAAAAGAGGCCGGTAGAGCACTCTCCTGTG---GAGCCAGACTCCTCCTCGGGAACCGGAAAAAG
hu.1-C	418	CCGGGAAAAAAGAGGCCGGTAGAGCACTCTCCTGTG---GAGCCAGACTCCTCCTCGGGAACCGGAAAAAG
hu.18-C	418	CCGGGAAAAAAGAGGCCGGTAGAGCACTCTCCTGTG---GAGCCAGACTCCTCCTCGGGAACCGGAAAAAG
hu.3-C	421	CCGGGAAAAAAGAGGCCGGTAGAGCACTCTCCTGTG---GAGCCAGACTCCTCCTCGGGAACCGGAAAAAG
hu.25-C	418	CCGGGAAAAAAGAGACC GG TAGAGCACTCTCCTGCG---GAGCCAGACTCCTCCTCGGGAACCGGAAAAAG
hu.15-C	418	CCGGGAAAAAAGAGGCCGGTAGAGCACTCTCCTGTG---GAGCCAGACTCCTCCTCGGGAACCGGAAAAAG
hu.16-C	418	CCGGGAAAAAAGAGGCCGGTAGAGCACTCTCCTGTG---GAGCCAGACTCCTCCTCGGGAACCGGAAAAAG
hu.11-C	418	CCGGGAAAAAAGAGGCCGGTAGAGCACTCTCCTGTG---GAGCCAGACTCCTCCTCGGGAACCGGAAAAAG
hu.10-C	418	CCGGGAAAAAAGAGGCCGGTAGAGCACTCTCCTGTG---GAGCCAGACTCCTCCTCGGGAACCGGAAAAAG
hu.4-C	418	CCGGGAAAAAAGAGGCCGGTAGAGCACTCTCCTGTG---GAGCCAGACTCCTCCTCGGGAACCGGAAAAAG
rh.54-D	418	CCTGGAAAGAAAGAGACCCGGTAGAACCGTCACTCAGCGTTCCCCCGACTCCTCCACGGGCATCGGCAAGA
rh.48-D	418	CCTGGAAAGAAAGAGACCCGGTAGAACCGTCACTCAGCGTTCCCCCGACTCCTCCACGGGCATCGGCAAGA
rh.55-D	418	CCTGGAAAGAAAGAGACCCGGTAGAACCGTCACTCAGCGTTCCCCCGACTCCTCCACGGGCATCGGCAAGA
rh.62-D	418	CCTGGAAAGAAAGAGACCCGGTAGAACCGTCACTCAGCGTTCCCCCGACTCCTCCACGGGCATCGGCAAGA
AAV7-D	418	CCTGCAAGAAAGAGACCCGGTAGAGCCGTCACTCAGCGTTCCCCCGACTCCTCCACGGGCATCGGCAAGA
rh.52-E	418	CCTGGAAAGAAAGAGACCCGGTAGAGCCGTCACTCAGCGTTCCCCCGACTCCTCCACGGGCATCGGCAAGA
rh.51-E	418	CCTGGAAAGAAAGAGACCCGGTAGAGCCGTCACTCAGCGTTCCCCCGACTCCTCCACGGGCATCGGCAAGA
hu.39-E	418	CCTGGAAAGAAAGAGACCCGGTAGAGCCGTCACTCAGCGTTCCCCCGACTCCTCCACGGGCATCGGCAAGA
rh.53-E	418	CCTGGAAAGAAAGAGACCCGGTAGAGCCGTCACTCAGCGTTCCCCCGACTCCTCCACGGGCATCGGCAAGA
hu.37-E	418	CCTGGAAAGAAAGAGACCCGGTAGAGCCGTCACTCAGCGTTCCCCCGACTCCTCCACGGGCATCGGCAAGA
rh.43-E	418	CCTGGAAAGAAAGAGACCCAGTAGAGCAGTCACTCAGCGTTCCCCCGACTCCTCCACGGGCATCGGCAAGA
rh.50-E	418	CCTGGAAAGAAAGAGACCCGGTAGAGCCGTCACTCAGCGTTCCCCCGACTCCTCCACGGGCATCGGCAAGA
rh.49-E	418	CCTGGAAAGAAAGAGACCCGGTAGAGCCGTCACTCAGCGTTCCCCCGACTCCTCCACGGGCATCGGCAAGA
rh.61-E	418	CCTGGAAAGAAAGAGACCCGGTAGAGCCGTCACTCAGCGTTCCCCCGACTCCTCCACGGGCATCGGCAAGA
hu.41-E	418	CCTGGAAAGAAAGAGACCCGGTAGAACCGCCACTCAGCGTTCCCCCGACTCCTCCACGGGCATCGGCAAGA
rh.64-E	418	CCTGGAAAGAAAGAGACCCGGTAGAGCCGTCACTCAGCGTTCCCCCGACTCCTCCACGGGCATCGGCAAGA
hu.42-E	418	CCTGGAAAGAAAGAGACCCGGTAGAACCGTCACTCAGCGTTCCCCCGACTCCTCCACGGGCATCGGCAAGA
rh.57-E	418	CCTGGAAAGAAAGAGACCCGGTAGAGCCGTCACTCAGCGTTCCCCCGACTCCTCCACGGGCATCGGCAAGA
hu.40-E	418	CCTGGAAAGAAAGAGACCCGGTAGAACCGTCACTCAGCGTTCCCCCGACTCCTCCACGGGCATCGGCAAGA
AAV8-E	418	CCTGGAAAGAAAGAGACCCGGTAGAGCCATCACTCAGCGTTCTCCAGACTCCTCTACGGGCATCGGCAAGA

FIG. 35

rh. 58-E	418	CCTGGAAGAAAGAGACCGGTAGAACCGTACCTCAGCGTTCCCCCGACTCCTCCACGGGCATCGGCAAGA	500	510	520	530	540	550	560
rh. 40-E	418	CCTGGAAGAAAGAGACCGGTAGAACCGTACCTCAGCGTTCCCCCGACTCCTCCACGGGCATCGGCAAGA						
hu. 67-E	418	CCTGGAAGAAAGAGACCGGTAGAACCGTACCTCAGCGTTCCCCCGACTCCTCCACGGGCATCGGCAAGA							
hu. 17-E	418	CCTGGAAGAAAGAGACCGGTAGAGCCATCACCCAGCGTTCTCCAGACTCCTCTACGGGCATCGGCAAGA							
hu. 6-E	418	CCTGGAAGAAAGAGACCGGTAGAGCCATCACCCAGCGTTCTCCAGACTCCTCTACGGGCATCGGCAAGA							
hu. 66-E	418	CCTGGAAGAAAGAGACCGGTAGAACCGTACCTCAGCGTTCCCCCGACTCCTCCCGGGCATCGGCAAGA							
rh. 38-E	418	CCTGGAAGAAAGAGACCGGTAGAACCGTACCTCAGCGTTCCCCCGACTCCTCCACGGGCATCGGCAAGA							
hu. 32-F	418	CCTGGAAGAAAGAGAGGCGCTGAGAGCAGTCTCCTCAG---GAACCGGACTCCTCCGCGGGTATTGGCAAAT							
AAV9/hu	418	CCTGGAAGAAAGAGAGGCGCTGAGAGCAGTCTCCTCAG---GAACCGGACTCCTCCGCGGGTATTGGCAAAT							
hu. 31-F	418	CCTGGAAGAAAGAGAGGCGCTGAGAGCAGTCTCCTCAG---GAACCGGACTCCTCCGCGGGTATTGGCAAAT							
AAV5	452	GAAAGAAAGGCTCGGACCCGAAGAGGACTCCAAGCCTTCCACCTCGTCAGACGCCGAAGCTGGACCCAGCGG						
AAV3-3	485	CGGGCAACAGCCTGCCAGAAAAGACTAAATTTGGTCAGACTGGAGACTCAGAGTCAGTCCCAGAC--							
AAV4-4	482	AAGGCAAGCAGCGCGCTAAAAAGAGCTCGTTTCGAAGACGAAACTGGAGCAGCGGACGCC-----							
AAV1-A	485	CAGGCCAGCAGCCCGCTAAAAAGAGACTCAATTTTGGTCAGACTGGGACTCAGAGTCAGTCCCCGAT--							
hu. 46-A	485	CAGGCCAGCAGCCCGCTAAAAAGAGACTCAATTTTGGTCAGACTGGGACTCAGAGTCAGTCCCCGAT--							
hu. 48-A	485	CAGGCCAGCAGCCCGCTAAAAAGAGACTCAATTTTGGCCAGACTGGCCAGTCAAGTCAGTCCCCGAT--							
hu. 44-A	485	CAGGCCAGCAGCCCGCTAAAAAGAGACTCAATTTTGGTCAGACTGGGACTCAGAGTCAGTCCCCGAT--							
hu. 43-A	488	AAGGCCAGCAGCCCGCTAAAAAGAGACTGAATTTTGGTCAGACTGGCCAGTCAAGTCAGTCCCCGAC--							
AAV6-A	485	CAGGCCAGCAGCCCGCTAAAAAGAGACTCAATTTTGGTCAGACTGGCCAGTCAAGTCAGTCCCCGAC--							
hu. 34-B	485	CGGGCCAGCAGCCCTGCAAGAAAAGATTGAATTTTGGTCAGACTGGAGACGCAGACTCAGTACCTGAC--							
hu. 47-B	485	CGGGCCAGCAGCCCTGCAAGAAAAGATTGAATTTTGGTCAGACTGGAGACGCAGACTCAGTACCTGAC--							
hu. 29-B	485	CGGGCAACAGCCTGCAAGAAAAGATTGAATTTTGGTCAGACTGGAGACTCAGACTCCGTACCTGAC--							
hu. 63-B	485	CGGGCCAGCAGCCCTGCAAGAAAAGATTGAATTTTGGTCAGACTGGAGACGCAGACTCCGTACCTGAC--							
hu. 56-B	485	CGGGCAACAGCCTGCAAGAAAAGATTGAATTTTGGTCAGACTGGAGACGCAGACTCCGTACCTGAC--							
hu. 45-B	485	CGGGCCAGCAGCCCTGCAAGAAAAGATTGAATTTTGGTCAGACTGGAGACGCAGACTCAGTACCTGAC--							
hu. 57-B	482	CGGGCAACAGCCTGCAAGAAAAGATTGAATTTTGGTCAGACTGGAGACGCAGACTCCGTACCTGAC--							
hu. 35-B	485	CGGGCCAGCAGCCCTGCAAGAAAAGATTGAATTTTGGTCAGACTGGAGACGCAGACTCAGTACCTGAC--							

FIG. 3F

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hu. 58-B 485 CGGGCAACCCAGCCTGCAAGAAAGAGATTGAATTTTCGGTCAGACTGGAGACGCAGACTCCGTACCTGAC--
 hu. 28-B 485 CGGGCAACCCAGCCTGCAAGAAAGAGATTGAATTTTCGGTCAGACTGGAGACTCAGACTCCGTACCTGAC--
 hu. 51-B 485 CGGGCCAGCAGCCTGCAAGAAAGAGATTGAATTTTCGGTCAGACTGGAGACGCAGACTCAGTACCTGAC--
 hu. 19-B 485 CGGGCCAGCAGCCTGCAAGAAAGAGATTGAATTTTCGGCCAGACTGGAGACGCAGACTCAGTACCTGAC--
 hu. 49-B 485 CGGGCCAGCAGCCTGCGAGAAAGAGATTGAATTTTCGGTCAGACTGGAGACGCAGACTCCGTACCTGAC--
 hu. 52-B 485 CGGGCCAGCAGCCTGCAAGAAAGAGATTGAATTTTCGGTCAGACTGGAGACGCAGACTCAGTACCTGAC--
 hu. 13-B 485 CGGGCCAGCAGCCTGCAAGAAAGAGATTGAATTTTCGGTCAGACTGGAGACGCAGACTCCGTACCTGAC--
 AAV2-B 485 CGGGCCAGCAGCCTGCAAGAAAGAGATTGAATTTTCGGTCAGACTGGAGACGCAGACTCAGTACCTGAC--
 hu. 20-B 485 CGGGCCAGCAGCCTGCAAGAAAGAGATTGAATTTTCGGTCAGACTGGAGACGCAGACTCAGTACCTGAC--
 hu. 24-B 485 CGGGCCAGCAGCCTGCAAGAAAGAGATTGAATTTTCGGTCAGACTGGAGACGCAGACTCAGTACCTGAC--
 hu. 64-B 485 CGGGCCAGCAGCCTGCAAGAAAGAGATTGAATTTTCGGTCAGACTGGAGACGCAGACTCCGTACCTGAC--
 hu. 27-B 485 CGGGCCAGCAGCCTGCAAGAAAGAGATTGAATTTTCGGTCAGACTGGAGACGCAGACTCAGTACCTGAC--
 hu. 21-B 485 CGGGCCAGCAGCCTGCAAGAAAGAGATTGAATTTTCGGTCAGACTGGAGACGCAGACTCAGTACCTGAC--
 hu. 22-B 485 CGGGCCAGCAGCCTGCAAGAAAGAGATTGAATTTTCGGTCAGACTGGAGACGCAGACTCAGTACCTGAC--
 hu. 23-B 485 CGGGCCAGCAGCCTGCAAGAAAGAGATTGAATTTTCGGTCAGACTGGAGACGCAGACTCAGTACCTGAC--
 hu. 7-C 485 CGGGCCAGCAGCCTGCAAGAAAGAGATTGAATTTTCGGTCAGACTGGAGACGCAGACTCCGTACCTGAC--
 hu. 61-C 485 CGGGCCAGCAGCCTGCAAGAAAGAGATTGAATTTTCGGTCAGACTGGAGACGCAGACTCCGTACCTGAC--
 rh. 56-C 485 CGGGCCAGCAGCCTGCAAGAAAGAGATTGAATTTTCGGTCAGACTGGAGACGCAGACTCCGTACCTGAC--
 hu. 9-C 485 CGGGCCATCAGCCTGCGAGAAAGAGATTGAATTTTCGGTCAGACTGGAGACGCAGACTCCGTACCTGAC--
 hu. 54-C 485 CGGGCCAGCAGCCTGCAAGAAAGAGACTGAATTTTCGGTCAGACTGGAGACGCAGACTCCGTACCTGAC--
 hu. 53-C 485 CGGGCCAGCAGCCTGCAAGAAAGAGACTGAATTTTCGGTCAGACTGGAGACGCAGACTCCGTACCTGAC--
 hu. 60-C 485 CGGGCCAGCAGCCTGCAAGAAAGAGATTGAATTTTCGGTCAGACTGGAGACGCAGACTCCGTACCTGAC--
 hu. 55-C 485 CGGGCCAGCAGCCTGCAAGAAAGAGACTGAATTTTCGGTCAGACTGGAGACGCAGACTCCGTACCTGAC--
 hu. 2-C 485 CGGGCCAGCGCCTGCAAGAAAGAGATTAAATTTTCGGTCAGACTGGAGACGCAGACTCCGTACCTGAC--
 hu. 1-C 485 CGGGCCAGCAGCCTGCAAGAAAGAGATTAAATTTTCGGTCAGACTGGAGACGCAGACTCCGTACCTGAC--
 hu. 18-C 485 CGGGCCAGCAGCCTGCGAGAAAGAGATTGAATTTTCGGTCAGACTGGAGACGCAGACTCCGTACCTGAC--
 hu. 3-C 488 CGGGCCAGCAGCCTGCAAGAAAGAGATTAAATTTTCGGTCAGACTGGAGACGCAGACTCCGTACCTGAC--
 hu. 25-C 485 CGGGCCAGCAGCCTGCAAGAAAGAGATTGAATTTTCGGTCAGACTGGAGACGCAGACTCCGTACCTGAC--
 hu. 15-C 485 CGGGCAACCCAGCCTGCAAGAAAGAGATTGAATTTTCGGTCAGACTGGAGACGCAGACTCCGTACCTGAC--
 hu. 16-C 485 CGGGCAACCCAGCCTGCAAGAAAGAGATTGAATTTTCGGTCAGACTGGAGACGCAGACTCCGTACCTGAC--

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hu.11-C 485 CGGGCCATCAGCCTGCGAGAAAGAGATTGAATTTTGGTCAGACTGGAGACGCAGACTCCGTACCTGAC--
 hu.10-C 485 CGGGCCATCAGCCTGCGAGAAAGAGATTGAATTTTGGTCAGACTGGAGACGCAGACTCCGTACCTGAC--
 hu.4-C 485 CGGGCCAGCAGCCTGCAAGAAAGATTAATTTTGGTCAGACTGGAGACGCAGACTCCGTACCTGAC--
 rh.54-D 488 AAGGCCAGCAGCCCGCTAGAAAGAGACTGAACTTTGGGCAGACTGGCGACTCAGAGTCAGTCCCCGAC--
 rh.48-D 488 AAGGCCAGCAGCCCGCTAGAAAGAGACTGAACTTTGGGCAGACTGGCGACTCAGAGTCAGTCCCCGAC--
 rh.55-D 488 AAGGCCAGCAGCCCGCCAGAAAGAGACTCAATTTTCGGTCAGACTGGCGACTCAGAGTCAGTCCCCGAC--
 rh.62-D 488 AAGGCCAGCAGCCCGCTAGAAAGAGACTGAACTTTTGGGCAGACTGGCGACTCAGAGTCAGTCCCCGAC--
 AAV7-D 488 AAGGCCAGCAGCCCGCCAGAAAGAGACTCAATTTTCGGTCAGACTGGCGACTCAGAGTCAGTCCCCGAC--
 rh.52-E 488 AAGGCCAGCAGCCCGCCAGAAAGAGACTCAATTTTCGGTCAGACTGGCGACTCAGAGTCAGTCCCCGAC--
 rh.51-E 488 AAGGCCAGCAGCCCGCCAGAAAGAGACTCAATTTTCGGTCAGACTGGCGACTCAGAGTCAGTCCCCGAC--
 hu.39-E 488 AAGGCCAGCAGCCCGCCAGAAAGAGACTCAATTTTCGGTCGGACTGGCGACTCAGAGTCAGTCCCCGAC--
 rh.53-E 488 AAGGCCAGCAGCCCGCCAGAAAGAGACTCAATTTTCGGTCAGACTGGCGACTCAGAGTCAGTCCCCGAC--
 hu.37-E 488 AAGGCCAGCAGCCCGCTAAAAGAGACTGAACTTTTGGTCAGACTGGCGACTCAGAGTCAGTCCCCGAC--
 rh.43-E 485 AAGGCCAACAGCCCGCCAGAAAAGACTCAATTTTGGCCAGACTGGCGACTCAGAGTCAGTCCCCGAC--
 rh.50-E 488 AAGGCCAGCAGCCCGCCGAAAGAGACTCAATTTTCGGTCAGACTGGCGACTCAGAGTCAGTCCCCGAC--
 rh.49-E 488 AAGGCCAGCAGCCCGCCAGAAAGAGACTCAATTTTCGGTCAGACTGGCGACTCAGAGTCAGTCCCCGAC--
 rh.61-E 488 AAGGCCAGCAGCCCGCCAGAAAGAGACTCAATTTTCGGTCAGACTGGCGACTCAGAGTCAGTCCCCGAC--
 hu.41-E 488 AAGGCCAGCAGCCCGCTAAAAGAGACTGAACTTTTGGTCAGACTGGCGACTCAGAGTCAGTCCCCGAC--
 rh.64-E 488 AAGGCCAGCAGCCCGCCAGAAAGAGACTCAATTTTCGGTCAGACTGGCGACTCAGAGTCAGTCCCCGAC--
 hu.42-E 488 AAGGCCAGCAGCCCGCTAAAAGAGACTGAACTTTTGGTCAGACTGGCGACTCAGAGTCAGTCCCCGAC--
 rh.57-E 488 AAGGCCAGCAGCCCGCCAGAAAGAGACTCAATTTTCGGTCAGACTGGCGACTCAGAGTCAGTCCCCGAC--
 hu.40-E 488 AAGGCCAGCAGCCCGCTAAAAGAGACTGAGCTTTGGTCAGACTGGCGACTCAGAGTCAGTCCCCGAC--
 AAV8-E 488 AAGGCCAACAGCCCGCCAGAAAAGACTCAATTTTGGTCAGACTGGCGACTCAGAGTCAGTCCCCGAC--
 rh.58-E 488 AAGGCCAGCAGCCCGCTAGAAAGAGACTGAACTTTTGGCAGACTGGCGACTCAGAGTCAGTCCCCGAC--
 rh.40-E 488 AAGGCCAGCAGCCCGCTAAAAGAGACTGAACTTTTGGTCAGACTGGCGACTCAGAGTCAGTCCCCGAC--
 hu.67-E 488 AAGGCCAGCAGCCCGCTAAAAGAGACTGAACTTTTGGTCAGACTGGCGACTCAGAGTCAGTCCCCGAC--
 hu.17-E 488 CAGGCCAGCAGCCCGCGAAAAGAGACTCAACTTTTGGCAGACTGGCGACTCAGAGTCAGTCCCCGAC--
 hu.6-E 488 CAGGCCAGCAGCCCGCGAAAAGAGACTCAACTTTTGGCAGACTGGCGACTCAGAGTCAGTCCCCGAC--
 hu.66-E 488 AAGGCCAGCAGCCCGCTAAAAGAGACTGAACTTTTGGTCAGACTGGCGACTCAGAGTCAGTCCCCGAC--
 rh.38-E 488 AAGGCCAGCGGGCCCGCTAAAAGAGACTGAACTTTTGGTCAGACTGGCGACTCAGAGTCAGTCCCCGAC--

FIG. 3V

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hu.32-F	485	CGGGTTACAGCCCGCTAAAAAGAACTCAATTTCGGTCAGACTGGCGACACAGAGTCAGTCCCCGAC--	570	580	590	600	610	620	630
AAV9/hu	485	CGGGTGACAGCCCGCTAAAAAGAGACTCAATTTCGGTCAGACTGGCGACACAGAGTCAGTCCCAGAC--							
hu.31-F	485	CGGGTTACAGCCCGCTAAAAAGAACTCAATTTCGGTCAGACTGGCGACACAGAGTCAGTCCCCGAC--							
AAV5	522							
AAV3-3	552	ATCCAGCAGCTGCAAAATCCAGCCCCAACCCAGCCTCAAGTTTGGGAGCTGATACAATGTCTGCGGGAGGT							
AAV4-4	552	-CCTCAACCTCTCGGAGAACCCAGCAGCCCCACAAAGTTTGGGATCTAATAACAATGGCTTCAGGCGGT							
AAV1-A	546	-----CCTGAGGGATCAACTTCGGAGCCATGTCT-----GATGACAGTGAGATGCGTGCAGCAGCT							
hu.46-A	552	-CCACAACTCTCGGAGAACCTCCAGCAACCCCGCTGCTGTGGGACCTACTACAATGGCTTCAGGCGGT							
hu.48-A	552	-CCACAACTCTCGGAGAACCTCCAGCAACCCCGCTGCTGTGGGACCTACTACAATGGCTTCAGGCGGT							
hu.44-A	552	-CCACAACTCTCGGAGAACCTCCAGCAACCCCGCTGCTGTGGGACCTACTACAATGGCTTCAGGCGGT							
hu.43-A	555	-CCTCAACCAATCGGAGAACCCAGCAGGCCCCCTCTGGTCTGGGATCTGGTACAATGGCTTCAGGCGGT							
AAV6-A	552	-CCACAACTCTCGGAGAACCTCCAGCAACCCCGCTGCTGTGGGACCTACTACAATGGCTTCAGGCGGT							
hu.34-B	552	-CCCAGCCTCTCGGACAGCCACCCAGCAGCCCCCTCTGGTCTGGGAACTAATACGATGGCTACAGGCAGT							
hu.47-B	552	-CCCAGCCTCTCGGACAGCCACCCAGCAGCCCCCTCTGGTCTGGGAACTAATACGATGGCTACAGGCAGT							
hu.29-B	552	-CCCAGCCTCTCGGACAGCCACCCAGCAGCCCCCTCTGGTCTGGGAACTAATACGATGGCTACAGGCAGT							
hu.63-B	552	-CCCAGCCTCTCGGACAGCCACCCAGCAGCCCCCTCTGGTCTGGGAACTAATACGATGGCTACAGGCAGT							
hu.56-B	552	-CCCAGCCTCTCGGACAGCCACCCAGCAGCCCCCTCTGGTCTGGGAACTAATACGATGGCTACAGGCAGT							
hu.45-B	552	-CCCAGCCTCTCGGACAGCCACCCAGCAGCCCCCTCTGGTCTGGGAACTAATACGATGGCTACAGGCAGT							
hu.57-B	549	-CCCAGCCTCTCGGACAGCCACCCAGCAGCCCCCTCTGGTCTGGGAACTAATACGATGGCTACAGGCAGT							
hu.35-B	552	-CCCAGCCTCTCGGACAGCCACCCAGCAGCCCCCTCTGGTCTGGGAACTAATACGATGGCTACAGGCAGT							
hu.58-B	552	-CCCAGCCTCTCGGACAGCCACCCAGCAGCCCCCTCTGGTCTGGGAACTAATACGATGGCTACAGGCAGT							
hu.28-B	552	-CCCAGCCTCTCGGACAGCCACCCAGCAGCCCCCTCTGGTCTGGGAACTAATACGATGGCTACAGGCAGT							
hu.51-B	552	-CCCAGCCTCTCGGACAGCCACCCAGCAGCCCCCTCTGGTCTGGGAACTAATACGATGGCTACAGGCAGT							
hu.19-B	552	-CCCAGCCTCTCGGACAGCCACCCAGCAGCCCCCTCTGGTCTGGGAACTAATACGATGGCTACAGGCAGT							
hu.49-B	552	-CCCAGCCTCTCGGACAGCCACCCAGCAGCCCCCTCTGGTCTGGGAACTAATACGATGGCTACAGGCAGT							
hu.52-B	552	-CCCAGCCTCTCGGACAGCCACCCAGCAGCCCCCTCTGGTCTGGGAACTAATACGATGGCTACAGGCAGT							
hu.13-B	552	-CCCAGCCTCTCGGACAGCCACCCAGCAGCCCCCTCTGGTCTGGGAACTAATACGATGGCTACAGGCAGT							

FIG. 3W

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AAV2-B	552	-CCCCAGCCTCTCGGACAGCCACCAGCAGCCCCCTCTGGTCTGGGAACCTAATACGATGGCTACAGGCAGT
hu. 20-B	552	-CCCCAGCCTCTCGGACAGCCACCAGCAGCCCCCTCTGGTCTGGGAACCTAATACGATGGCTTCAGGCAGT
hu. 24-B	552	-CCCCGGCCTCTCGGACAGCCACCAGCAGCCCCCTCTGGTCTGGGAACCTAATACGATGGCTTCAGGCAGT
hu. 64-B	552	-CCCCAGCCTCTCGGACAGCCACCAGCAGCCCCCTCTGGTCTGGGAACCTAATACGATGGCTACAGGCAGT
hu. 27-B	552	-CCCCAGCCTCTCGGACAGCCACCAGCAGCCCCCTCTGGTCTGGGAACCTAATACGATGGCTTCAGGCAGT
hu. 21-B	552	-CCCCGGCCTCTCGGACAGCCACCAGCAGCCCCCTCTGGTCTGGGAACCTAATACGATGGCTTCAGGCAGT
hu. 22-B	552	-CCCCAGCCTCTCGGACAGCCACCAGCAGCCCCCTCTGGTCTGGGAACCTAATACGATGGCTTCAGGCAGT
hu. 23-B	552	-CCCCAGCCTCTCGGACAGCCACCAGCAGCCCCCTCTGGTCTGGGAACCTAATACGATGGCTTCAGGCAGT
hu. 7-C	552	-CCCCAGCCTCTCGGACAGCCACCAGCAGCCCCCTCTGGTCTGGGATCTACTACAATGGCTACAGGCAGT
hu. 61-C	552	-CCCCAGCCTCTCGGACAGCCACCAGCAGCCCCCTCTGGTCTGGGATCTACTACAATGGCTACAGGCAGT
rh. 56-C	552	-CCCCAGCCTCTCGGACAGCCACCAGCAGCCCCCTCTGGTTTGGGATCTACTACAATGGCTACAGGCAGT
hu. 9-C	552	-CCCCAGCCTCTCGGACAGCCACCAGCAGCCCCCACAAAGTTTGGGATCTACTACAATGGCTACAGGCAGT
hu. 54-C	552	-CCCCAGCCTCTCGGACAGCCACCAGCAGCCCCCACAAAGTTTGGGATCTACTACAATGGCTACAGGCAGT
hu. 53-C	552	-CCCCAGCCTCTCAGACAGCCACCAGCAGCCCCCACAAAGTTTGGGATCTACTACAATGGCTACAGGCAGT
hu. 60-C	552	-CCCCAGCCTCTCGGACAGCCACCAGCAGCCCCCTCTGGTCTGGGATCTACTACAATGGCTACAGGCAGT
hu. 55-C	552	-CCCCAGCCTCTCGGACAGCCACCAGCAGCCCCCACAAAGTTTGGGATCTACTACAATGGCTACAGGCAGT
hu. 2-C	552	-CCCCAGCCTCTCGGACAGCCACCAGCAGCCCCCTCTGGTCTGGGATCTACTACAATGGCTACAGGCAGT
hu. 1-C	552	-CCCCAGCCTCTCGGACAGCCACCAGCAGCCCCCTCTGGTCTGGGATCTACTACAATGGCTACAGGCAGT
hu. 18-C	552	-CCCCAGCCTCTCGGACAGCCACCAGCAGCCCCCTCTGGTCTGGGATCTACTACAATGGCTTCAGGCAGT
hu. 3-C	555	-CCCCAGCCTCTCGGACAGCCACCAGCAGCCCCCTCTGGTCTGGGATCTACTACAATGGCTACAGGCAGT
hu. 25-C	552	-CCCCAGCCTCTCGGACAGCCACCAGCAGCCCCCTCTGGTCTGGGATCTACTACAATGGCTACAGGCAGT
hu. 15-C	552	-CCCCAGCCTCTCGGACAGCCACCAGCAGCCCCCTCTGGTCTGGGATCTACTACAATGGCTACAGGCAGT
hu. 16-C	552	-CCCCAGCCTCTCGGACAGCCACCAGCAGCCCCCTCTGGTCTGGGATCTACTACAATGGCTACAGGCAGT
hu. 11-C	552	-CCCCAGCCTCTCGGACAGCCACCAGCAGCCCCCACAAAGTTTGGGATCTACTACAATGGCTACAGGCAGT
hu. 10-C	552	-CCCCAGCCTCTCGGACAGCCACCAGCAGCCCCCACAAAGTTTGGGATCTACTACAATGGCTACAGGCAGT
hu. 4-C	552	-CCCCAGCCTCTCGGACAGCCACCAGCAGCCCCCTCTGGTCTGGGATCTACTACAATGGCTACAGGCAGT
rh. 54-D	555	-CCTCAACCTCTCGGAGAACCCACCAGCAGGCCCTCTGGTCTGGGATCTGGTACAAATGGCTGCAGGCGGT
rh. 48-D	555	-CCTCAACCAATCGGAGAACCCACCAGCAGGCCCTCTAGTGTGGGATCTGGTACAAATGGCTGCAGGCGGT
rh. 55-D	555	-CCTCAACCTATCGGAGAACCTCCAGCAGGCCCTCTAGTGTGGGATCTGGTACAAATGGCTGCAGGCGGT
rh. 62-D	555	-CCTCAACCAATCGGAGAGCCACCAGCAGGCCCTCTGGTCTGGGATCTGGTACAAATGGCTGCAGGCGGT

FIG. 3X

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AAV7-D	555	-CCTCAACCTCTCGGAGAAACCTCCAGCAGCGCCCTCTAGTGTGGATCTGGTACAGTGGTGCAGGCGGT	640	650	660	670	680	690	700
rh. 52-E	555	-CCTCAACCTATCGGAGAAACCTCCAGCAGCGCCCTCTAGTGTGGATCTGGTACAAATGGCTGCAGGCGGT							
rh. 51-E	555	-CCTCAACCTATCGGAGAAACCTCCAGCAGCGCCCTCTAGTGTGGATCTGGTACAAATGGCTGCAGGCGGT							
hu. 39-E	555	-CCTCAACCTATCGGAGAAACCTCCAGCAGCGCCCTCTAGTGTGGATCTGGTACAAATGGCTGCAGGCGGT							
rh. 53-E	555	-CCTCAACCTATCGGAGAAACCTCCAGCAGCGCCCTCTAGTGTGGATCTGGTACAAATGGCTGCAGGCGGT							
hu. 37-E	555	-CCTCAACCAATCGGAGAAACCAACAGCAGCGCCCTCTGGTCTGGATCTGGTACAAATGGCTGCAGGCGGT							
rh. 43-E	552	-CCTCAACCTCTCGGAGAAACCTCCAGCAGCGCCCTCTGGTCTGGACCTAATAACAATGGCTGCAGGCGGT							
rh. 50-E	555	-CCTCAACCTATCGGAGAAACCTCCAGCAGCGCCCTCTAGTGTGGATCTGGTACAAATGGCTGCAGGCGGT							
rh. 49-E	555	-CCTCAACTTATCGGAGAAACCTCCAGCAGCGCCCTCTAGTGTGGATCTGGTACAAATGGCTGCAGGCGGT							
rh. 61-E	555	-CCTCAACCTATCGGAGAAACCTCCAGCAGCGCCCTCTAGTGTGGATCTGGTACAAATGGCTGCAGGCGGT							
hu. 41-E	555	-CCTCAACCAATCGGAGAAACCAACAGCAGCGCCCTCTGGTCTGGATCTGGTACAAATGGCTGCAGGCGGT							
rh. 64-E	555	-CCTCAACCTATCGGAGAAACCTCCAGCAGCGCCCTCTAGTGTGGATCTGGTACAAATGGCTGCAGGCGGT							
hu. 42-E	555	-CCTCAACCAATCGGAGAAACCAACAGCAGCGCCCTCTGGTCTGGATCTGGTACAAATGGCTGCAGGCGGT							
rh. 57-E	555	-CCTCAACCTATCGGAGAAACCTCCAGCAGCGCCCTCTAGTGTGGATCTGGTACAAATGGCTGCAGGCGGT							
hu. 40-E	555	-CCTCAACCAATCGGAGAAACCAACAGCAGCGCCCTCTGGTCTGGATCTGGTACAAATGGCTGCAGGCGGT							
AAV8-E	555	-CCTCAACCTCTCGGAGAAACCTCCAGCAGCGCCCTCTGGTCTGGACCTAATAACAATGGCTGCAGGCGGT							
rh. 58-E	555	-CCTCAACCAATCGGAGAAACCTCCAGCAGCGCCCTCTAGTGTGGATCTGGTACAAATGGCTGCAGGCGGT							
rh. 40-E	555	-CCTCAACCAATCGGAGAAACCAACAGCAGCGCCCTCTGGTCTGGATCTGGTACAAATGGCTGCAGGCGGT							
hu. 67-E	555	-CCTCAACCAATCGGAGAAACCAACAGCAGCGCCCTCTGGTCTGGATCTGGTACAAATGGCTGCAGGCGGT							
hu. 17-E	555	-CCTCAACCAATCGGAGAAACCAACAGCAGCGCCCTCTGGTCTGGATCTGGTACAAATGGCTGCAGGCGGT							
hu. 6-E	555	-CCTCAACCAATCGGAGAAACCAACAGCAGCGCCCTCTGGTCTGGATCTGGTACAAATGGCTGCAGGCGGT							
hu. 66-E	555	-CCTCAACCAATCGGAGAAACCAACAGCAGCGCCCTCTGGTCTGGATCTGGTACAAATGGCTGCAGGCGGT							
rh. 38-E	555	-CCTCAACCAATCGGAGAAACCAACAGCAGCGCCCTCTGGTCTGGATCTGGTACAAATGGCTGCAGGCGGT							
hu. 32-F	552	-CCTCAACCAATCGGAGAAACCTCCCGCAGCGCCCTCAGGTCTGGATCTCTTACAATGGCTTCAAGTGGT							
AAV9/hu	552	-CCTCAACCAATCGGAGAAACCTCCCGCAGCGCCCTCAGGTCTGGATCTCTTACAATGGCTTCAAGTGGT							
hu. 31-F	552	-CCTCAACCAATCGGAGAAACCTCCCGCAGCGCCCTCAGGTCTGGATCTCTTACAATGGCTTCAAGTGGT							

AAV5	592	GGCGGCCCATTTGGCGGACAAATAACCAAGGTGCCGATGGAGTGGGCAATGCCCTCGGAGATTGGCAATTGCGG	640	650	660	670	680	690	700
								

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AAV3-3 622 GCGCACCAATGGCAGACAAATAACGAGGGTGCCGATGGAGTGGGTAATTCCTCAGGAAATTGGCATTGCG
 AAV4-4 604 GCGGAGCTGCAGTCGAGGCGGACAAAGGTGCCGATGGAGTGGGTAATGCCCTCGGATGATTGGCATTGCG
 AAV1-A 622 GCGCACCAATGGCAGACAAATAACGAAAGGCGCCGACGGAGTGGTAATGCCCTCAGGAAATTGGCATTGCG
 hu.46-A 622 GCGCACCAATGGCAGACAAATAACGAAAGGCGCCGACGGAGTGGTAATGCCCTCAGGAAATTGGCATTGCG
 hu.48-A 622 GCGCACCAATGGCAGACAAATAACGAAAGGCGCCGACGGAGTGGTAATGCCCTCAGGAAATTGGCATTGCG
 hu.44-A 622 GCGCACCAATGGCAGACAAATAACGAAAGGCGCCGACGGAGTGGTAATGCCCTCAGGAAATTGGCATTGCG
 hu.43-A 625 GCGCTCCAATGGCAGACAAATAACGAAAGGCGCCGACGGAGTGGTAATGCCCTCAGGAAATTGGCATTGCG
 AAV6-A 622 GCGCACCAATGGCAGACAAATAACGAAAGGCGCCGACGGAGTGGTAATGCCCTCAGGAAATTGGCATTGCG
 hu.34-B 622 GCGCACCAATGGCAGACAAATAACGAAAGGCGCCGACGGAGTGGTAATGCCCTCAGGAAATTGGCATTGCG
 hu.47-B 622 GCGCACCAATGGCAGACAAATAACGAAAGGCGCCGACGGAGTGGTAATGCCCTCAGGAAATTGGCATTGCG
 hu.29-B 622 GCGCACCAATGGCAGACAAATAACGAAAGGCGCCGACGGAGTGGTAATGCCCTCAGGAAATTGGCATTGCG
 hu.63-B 622 GCGCACCAATGGCAGACAAATAACGAAAGGCGCCGACGGAGTGGTAATGCCCTCAGGAAATTGGCATTGCG
 hu.56-B 622 GCGCACCAATGGCAGACAAATAACGAAAGGCGCCGACGGAGTGGTAATGCCCTCAGGAAATTGGCATTGCG
 hu.45-B 622 GCGCACCAATGGCAGACAAATAACGAAAGGCGCCGACGGAGTGGTAATGCCCTCAGGAAATTGGCATTGCG
 hu.57-B 619 GCGCACCAATGGCAGACAAATAACGAAAGGCGCCGACGGAGTGGTAATGCCCTCAGGAAATTGGCATTGCG
 hu.35-B 622 GCGCACCAATGGCAGACAAATAACGAAAGGCGCCGACGGAGTGGTAATGCCCTCAGGAAATTGGCATTGCG
 hu.58-B 622 GCGCACCAATGGCAGACAAATAACGAAAGGCGCCGACGGAGTGGTAATGCCCTCAGGAAATTGGCATTGCG
 hu.28-B 622 GCGCACCAATGGCAGACAAATAACGAAAGGCGCCGACGGAGTGGTAATGCCCTCAGGAAATTGGCATTGCG
 hu.51-B 622 GCGCACCAATGGCAGACAAATAACGAAAGGCGCCGACGGAGTGGTAATGCCCTCAGGAAATTGGCATTGCG
 hu.19-B 622 GCGCACCAATGGCAGACAAATAACGAAAGGCGCCGACGGAGTGGTAATGCCCTCAGGAAATTGGCATTGCG
 hu.49-B 622 GCGCACCAATGGCAGACAAATAACGAAAGGCGCCGACGGAGTGGTAATGCCCTCAGGAAATTGGCATTGCG
 hu.52-B 622 GCGCACCAATGGCAGACAAATAACGAAAGGCGCCGACGGAGTGGTAATGCCCTCAGGAAATTGGCATTGCG
 hu.13-B 622 GCGCACCAATGGCAGACAAATAACGAAAGGCGCCGACGGAGTGGTAATGCCCTCAGGAAATTGGCATTGCG
 AAV2-B 622 GCGCACCAATGGCAGACAAATAACGAAAGGCGCCGACGGAGTGGTAATGCCCTCAGGAAATTGGCATTGCG
 hu.20-B 622 GCGCACCAATGGCAGACAAATAACGAAAGGCGCCGACGGAGTGGTAATGCCCTCAGGAAATTGGCATTGCG
 hu.24-B 622 GCGCACCAATGGCAGACAAATAACGAAAGGCGCCGACGGAGTGGTAATGCCCTCAGGAAATTGGCATTGCG
 hu.64-B 622 GCGCACCAATGGCAGACAAATAACGAAAGGCGCCGACGGAGTGGTAATGCCCTCAGGAAATTGGCATTGCG
 hu.27-B 622 GCGCACCAATGGCAGACAAATAACGAAAGGCGCCGACGGAGTGGTAATGCCCTCAGGAAATTGGCATTGCG
 hu.21-B 622 GCGCACCAATGGCAGACAAATAACGAAAGGCGCCGACGGAGTGGTAATGCCCTCAGGAAATTGGCATTGCG
 hu.22-B 622 GCGCACCAATGGCAGACAAATAACGAAAGGCGCCGACGGAGTGGTAATGCCCTCAGGAAATTGGCATTGCG

hu. 23-B	622	GGCGACCAATGGCAGACAATAACGAGGGCCGACGGAGTGGGTAATTCCTCGGGAAATTGGCATTGCG
hu. 7-C	622	GGCGACCAATGGCAGACAATAACGAGGGTCCGATGGAGTGGGTAATTCCTCAGGAAATTGGCATTGCG
hu. 61-C	622	GGCGACCAATGGCAGACAATAACGAGGGTGCCGATGGAGTGGGTAATTCCTCGGGAAATTGGCATTGCG
rh. 56-C	622	GGCGACCAATGGCAGACAATAACGAGGGTGCCGATGGAGTGGGTAATTCCTCAGGAAATTGGCATTGCG
hu. 9-C	622	GGCGACCAATGGCAGACAATAACGAGGGTGCCGATGGAGTGGGTAATTCCTCAGGAAATTGGCATTGCG
hu. 54-C	622	GGCGACCAATGGCAGACAATAACGAGGGTGCCGATGGAGTGGGTAATTCCTCAGGAAATTGGCATTGCG
hu. 53-C	622	GGCGACCAATGGCAGACAATAACGAGGGTGCCGATGGAGTGGGTAATTCCTCAGGAAATTGGCATTGCG
hu. 60-C	622	GGCGACCAATGGCAGACAATAACGAGGGTGCCGATGGAGTGGGTAATTCCTCGGGAAATTGGCATTGCG
hu. 55-C	622	GGCGACCAATGGCAGACAATAACGAGGGTGCCGATGGAGTGGGTAATTCCTCAGGAAATTGGCATTGCG
hu. 2-C	622	GGCGACCAATGGCAGACAATAACGAGGGTGCCGATGGAGTGGGTAATTCCTCAGGAAATTGGCATTGCG
hu. 1-C	622	GGCGACCAATGGCAGACAATAACGAGGGTGCCGATGGAGTGGGTAATTCCTCAGGAAATTGGCATTGCG
hu. 18-C	622	GGCGACCAATGGCAGACAATAACGAGGGTGCCGATGGAGTGGGTAATTCCTCAGGAAATTGGCATTGCG
hu. 3-C	625	GGCGACCAATGGCAGACAATAACGAGGGTGCCGATGGAGTGGGTAATTCCTCAGGAAATTGGCATTGCG
hu. 25-C	622	GGCGACCAATGGCAGACAATAACGAGGGTGCCGATGGAGTGGGTAATTCCTCAGGAAATTGGCATTGCG
hu. 15-C	622	GGCGACCAATGGCAGACAATAACGAGGGTGCCGATGGAGTGGGTAATTCCTCAGGAAATTGGCATTGCG
hu. 16-C	622	GGCGACCAATGGCAGACAATAACGAGGGTGCCGATGGAGTGGGTAATTCCTCAGGAAATTGGCATTGCG
hu. 11-C	622	GGCGACCAATGGCAGACAATAACGAGGGTGCCGATGGAGTGGGTAATTCCTCAGGAAATTGGCATTGCG
hu. 10-C	622	GGCGACCAATGGCAGACAATAACGAGGGTGCCGATGGAGTGGGTAATTCCTCAGGAAATTGGCATTGCG
hu. 4-C	622	GGCGACCAATGGCAGACAATAACGAGGGTGCCGATGGAGTGGGTAATTCCTCAGGAAATTGGCATTGCG
rh. 54-D	625	GGCGTCCAATGGCAGACAATAACGAGGGTGCCGATGGAGTGGGTAATTCCTCAGGAAATTGGCATTGCG
rh. 48-D	625	GGCGACCAATGGCTGACAATAACGAGGGTGCCGATGGAGTGGGTAATTCCTCAGGAAATTGGCATTGCG
rh. 55-D	625	GGCGACCAATGGCAGACAATAACGAGGGTGCCGATGGAGTGGGTAATTCCTCGGGAAATTGGCATTGCG
rh. 62-D	625	GGCGACCAATGGCTGACAATAACGAGGGTGCCGATGGAGTGGGTAATTCCTCAGGAAATTGGCATTGCG
AAV7-D	625	GGCGACCAATGGCAGACAATAACGAGGGTGCCGATGGAGTGGGTAATTCCTCAGGAAATTGGCATTGCG
rh. 52-E	625	GGCGACCAATGGCAGACAATAACGAGGGTGCCGATGGAGTGGGTAATTCCTCGGGAAATTGGCATTGCG
rh. 51-E	625	GGCGGCCAATGGCAGACAATAACGAGGGTGCCGATGGAGTGGGTAATTCCTCGGGAAATTGGCATTGCG
hu. 39-E	625	GGCGACCAATGGCAGACAATAACGAGGGTGCCGATGGAGTGGGTAATTCCTCGGGAAATTGGCATTGCG
rh. 53-E	625	GGCGACCAATGGCAGACAATAACGAGGGTGCCGATGGAGTGGGTAATTCCTCGGGAAATTGGCATTGCG
hu. 37-E	625	GGCGTCCAATGGCAGACAATAACGAGGGTGCCGATGGAGTGGGTAATTCCTCAGGAAATTGGCATTGCG
rh. 43-E	622	GGCGACCAATGGCAGACAATAACGAGGGTGCCGATGGAGTGGGTAATTCCTCGGGAAATTGGCATTGCG

FIG. 3AA

60/125

rh. 50-E	625	GGCGACCAATGGCAGACAATAACGAAGGTGCCGACGGAGTGGGTAGTTCTTCGGGAAATTGGCATTTGCG	710	720	730	740	750	760	770
rh. 49-E	625	GGCGACCAATGGCAGACAATAACGAAGGTGCCGACGGAGTGGGTAGTTCTTCGGGAAATTGGCATTTGCG						
rh. 61-E	625	GGCGACCAATGGCAGACAATAACGAAGGTGCCGACGGAGTGGGTAGTTCTTCGGGAAATTGGCATTTGCG	ATCCACGTGGATGGGGACAGAGTCGTACCAAGTCCACCCGAACCTGGGTGCTGCCCAGCTACAACAA						
hu. 41-E	625	GGCGTCCAATGGCAGACAATAACGAAGGTGCCGACGGAGTGGGTAGTTCTTCAGGAAATTGGCATTTGCG	ATCCCAATGGCTGGCGACAGAGTCATCACACAGCACACAGAACCTGGGCCCTGCCACTTACAACAA						
rh. 64-E	625	GGCGACCAATGGCAGACAATAACGAAGGTGCCGACGGAGTGGGTAGTTCTTCGGGAAATTGGCATTTGCG	ATCCACCTGGTCTGAGGGCCACGTCACGACCAACAGCACAGAACCTGGGTCTTGCCACCTACAACAA						
hu. 42-E	625	GGCGTCCAATGGCAGACAATAACGAAGGTGCCGACGGAGTGGGTAGTTCTTCAGGAAATTGGCATTTGCG	ATCCACATGGCTGGCGACAGAGTCATCACACAGCACACCGCACCTGGGCCCTTGCCACCTACAATAA						
rh. 57-E	625	GGCGGCGCAATGGCAGACAATAACGAAGGTGCCGACGGAGTGGGTAGTTCTTCGGGAAATTGGCATTTGCG	ATCCACATGGCTGGCGACAGAGTCATCACACAGCACACCGCACCTGGGCCCTTGCCACCTACAATAA						
hu. 40-E	625	GGCGTCCAATGGCAGACAATAACGAAGGTGCCGACGGAGTGGGTAGTTCTTCAGGAAATTGGCATTTGCG	ATCCACATGGCTGGCGACAGAGTCATCACACAGCACACCGCACCTGGGCCCTTGCCACCTACAATAA						
AAV8-E	625	GGCGACCAATGGCAGACAATAACGAAGGTGCCGACGGAGTGGGTAGTTCTTCGGGAAATTGGCATTTGCG	ATCCACATGGCTGGCGACAGAGTCATCACACAGCACACCGCACCTGGGCCCTTGCCACCTACAATAA						
rh. 58-E	625	GGCGACCAATGGCAGACAATAACGAAGGTGCCGACGGAGTGGGTAGTTCTTCGGGAAATTGGCATTTGCG	ATCCACATGGCTGGCGACAGAGTCATCACACAGCACACCGCACCTGGGCCCTTGCCACCTACAATAA						
rh. 40-E	625	GGCGTCCAATGGCAGACAATAACGAAGGTGCCGACGGAGTGGGTAGTTCTTCAGGAAATTGGCATTTGCG	ATCCACATGGCTGGCGACAGAGTCATCACACAGCACACCGCACCTGGGCCCTTGCCACCTACAATAA						
hu. 67-E	625	GGCGTCCAATGGCAGACAATAACGAAGGTGCCGACGGAGTGGGTAGTTCTTCAGGAAATTGGCATTTGCG	ATCCACATGGCTGGCGACAGAGTCATCACACAGCACACCGCACCTGGGCCCTTGCCACCTACAATAA						
hu. 17-E	625	GGCGTCCAATGGCAGACAATAACGAAGGTGCCGACGGAGTGGGTAGTTCTTCAGGAAATTGGCATTTGCG	ATCCACATGGCTGGCGACAGAGTCATCACACAGCACACCGCACCTGGGCCCTTGCCACCTACAATAA						
hu. 6-E	625	GGCGTCCAATGGCAGACAATAACGAAGGTGCCGACGGAGTGGGTAGTTCTTCAGGAAATTGGCATTTGCG	ATCCACATGGCTGGCGACAGAGTCATCACACAGCACACCGCACCTGGGCCCTTGCCACCTACAATAA						
hu. 66-E	625	GGCGTCCAATGGCAGACAATAACGAAGGTGCCGACGGAGTGGGTAGTTCTTCAGGAAATTGGCATTTGCG	ATCCACATGGCTGGCGACAGAGTCATCACACAGCACACCGCACCTGGGCCCTTGCCACCTACAATAA						
rh. 38-E	625	GGCGTCCAATGGCAGACAATAACGAAGGTGCCGACGGAGTGGGTAGTTCTTCAGGAAATTGGCATTTGCG	ATCCACATGGCTGGCGACAGAGTCATCACACAGCACACCGCACCTGGGCCCTTGCCACCTACAATAA						
hu. 32-F	622	GGCGACCAATGGCAGACAATAACGAAGGTGCCGACGGAGTGGGTAGTTCTTCGGGAAATTGGCATTTGCG	ATCCACATGGCTGGCGACAGAGTCATCACACAGCACACCGCACCTGGGCCCTTGCCACCTACAATAA						
AAV9/hu	622	GGCGACCAATGGCAGACAATAACGAAGGTGCCGACGGAGTGGGTAGTTCTTCGGGAAATTGGCATTTGCG	ATCCACATGGCTGGCGACAGAGTCATCACACAGCACACCGCACCTGGGCCCTTGCCACCTACAATAA						
hu. 31-F	622	GGCGACCAATGGCAGACAATAACGAAGGTGCCGACGGAGTGGGTAGTTCTTCGGGAAATTGGCATTTGCG	ATCCACATGGCTGGCGACAGAGTCATCACACAGCACACCGCACCTGGGCCCTTGCCACCTACAATAA						

FIG. 3AB

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AAV6-A	692	ATCCACATGGCTGGCGACAGAGTCA	TACCCACAGCACCCGAACATGGGCCTT	GCCCCACCTATAACAA
hu. 34-B	692	ATCCACATGGATGGCGACAGAGTCA	TACCCACAGCACCCGAACCTGGGCCCT	GCCCCACCTACAACAA
hu. 47-B	692	ATCCACATGGATGGCGACAGAGTCA	TACCCACAGCACCCGAACCTGGGCCCT	GCCCCACCTACAACAA
hu. 29-B	692	ATCCACATGGATGGCGACAGAGTCA	TACCCACAGCACCCGAACCTGGGCCCT	GCCCCACCTACAACAA
hu. 63-B	692	ATCCACATGGATGGCGACAGAGTCA	TACCCACAGCACCCGAACCTGGGCTCT	GCCCCACCTACAACAA
hu. 56-B	692	ATCCACATGGATGGCGACAGAGTCG	TACCCACAGCACCCGAACCTGGGCCCT	GCCCCACCTACAACAA
hu. 45-B	692	ATCCACATGGATGGCGACAGAGTCA	TACCCACAGCACCCGAACCTGGGCCCT	GCCCCACCTACAACAA
hu. 57-B	689	ATCCACATGGATGGCGACAGAGTCA	TACCCACAGCACCCGAACCTGGGCCCT	GCCCCACCTACAACAA
hu. 35-B	692	ATCCACATGGATGGCGACAGAGTCA	TACCCACAGCACCCGAACCTGGGCCCT	GCCCCACCTACAACAA
hu. 58-B	692	ATCCACATGGATGGCGACAGAGTCA	TACCCACAGCACCCGAACCTGGGCTCT	GCCCCACCTACAACAA
hu. 28-B	692	ATCCACATGGATGGCGACAGAGTCA	TACCCACAGCACCCGAACCTGGGCCCT	GCCCCACCTACAACAA
hu. 51-B	692	ATCCACATGGATGGCGACAGAGTCA	TACCCACAGCACCCGAACCTGGGCCCT	GCCCCACCTACAACAA
hu. 19-B	692	ATCCACATGGATGGCGACAGAGTCA	TACCCACAGCACCCGAACCTGGGCCCT	GCCCCACCTACAACAA
hu. 49-B	692	ATCCACATGGATGGCGACAGAGTCA	TACCCACAGCACCCGAACCTGGGCTCT	GCCCCACCTACAACAA
hu. 52-B	692	ATCCACATGGATGGCGACAGAGTCA	TACCCACAGCACCCGAACCTGGGCCCT	GCCCCACCTACAACAA
hu. 13-B	692	ATCCACATGGATGGCGACAGAGTCA	TACCCACAGCACCCGAACCTGGGCCCT	GCCCCACCTACAACAA
AAV2-B	692	ATCCACATGGATGGCGACAGAGTCA	TACCCACAGCACCCGAACCTGGGCCCT	GCCCCACCTACAACAA
hu. 20-B	692	ATCCACATGGATGGCGACAGAGTCA	TACCCACAGCACCCGAACCTGGGCCCT	GCCCCACCTACAACAA
hu. 24-B	692	ATCCACATGGATGGCGACAGAGTCA	TACCCACAGCACCCGAACCTGGGCCCT	GCCCCACCTACAACAA
hu. 64-B	692	ATCCACATGGATGGCGACAGAGTCA	TACCCACAGCACCCGAACCTGGGCTCT	GCCCCACCTACAACAA
hu. 27-B	692	ATCCACATGGATGGCGACAGAGTCA	TACCCACAGCACCCGAACCTGGGCCCT	GCCCCACCTACAACAA
hu. 21-B	692	ATCCACATGGATGGCGACAGAGTCA	TACCCACAGCACCCGAACCTGGGCCCT	GCCCCACCTACAACAA
hu. 22-B	692	ATCCACATGGATGGCGACAGAGTCA	TACCCACAGCACCCGAACCTGGGCCCT	GCCCCACCTACAACAA
hu. 23-B	692	ATCCACATGGATGGCGACAGAGTCA	TACCCACAGCACCCGAACCTGGGCCCT	GCCCCACCTGCAACAA
hu. 7-C	692	ATCCCAATGGCTGGCGACAGAGTCA	TACCCACAGCACCCGAACCTGGGCCCT	GCCCCACCTACAACAA
hu. 61-C	692	ATCCCAATGGCTGGCGACAGAGTCA	TACCCACAGCACCCGAACCTGGGCCCT	GCCCCACCTACAACAA
rh. 56-C	692	ATCCCAATGGCTGGCGACAGAGTCA	TACCCACAGCACCCGAACCTGGGCCCT	GCCCCACCTACAACAA
hu. 9-C	692	ATCCCAATGGCTGGCGACAGAGTCA	TACCCACAGCACCCGAACCTGGGCCCT	GCCCCACCTACAACAA
hu. 54-C	692	ATCCCAATGGCTGGCGACAGAGTCA	TACCCACAGCACCCGAACCTGGGCCCT	GCCCCACCTACAACAA
hu. 53-C	692	ATCCCAATGGCTGGCGACAGAGTCA	TACCCACAGCACCCGAACCTGGGCCCT	GCCCCACCTACAACAA

FIG. 3AC

hu. 60-C	692	ATCCCCAATGGCTGGGCGACAGAGTCATCACACAGCAGACCCGACCTGGGCCCTGCCACCTACAACAA
hu. 55-C	692	ATCCCCAATGGCTGGGCGACAGAGTCATCACACAGCAGACCCGAACTGGGCCCTGCCACCTACAACAA
hu. 2-C	692	ATCCCCAATGGCTGGGCGACAGAGTCATCACACAGCAGACCCGAACTGGGCCCTGCCACATACAACAA
hu. 1-C	692	ATCCCCAATGGCTGGGCGACAGAGTCATCACACAGCAGACCCGAACTGGGCCCTGCCACATACAACAA
hu. 18-C	692	ATCCCCAATGGCTGGGCGACAGAGTCATCACACAGCAGACCCGAACTGGGCCCTGCCACCTACAACAA
hu. 3-C	695	ATCCCCAATGGCTGGACGACAGAGTCATGCCACAGCAGACCCGAACTGGGCCCTGCCACATACAACAA
hu. 25-C	692	ATCCCCAATGGCTGGGCGACAGAGTCATCACACAAGCACTCGAACTGGGCCCTGCCACCTACAACAA
hu. 15-C	692	ATCCCCAATGGCTGGGCGACAGAGTCATCACACAGCAGACCCGAACTGGGCTCTGCCACCTACAATAA
hu. 16-C	692	ATCCCCAATGGCTGGGCGACAGAGTCATCACACAGCAGACCCGAACTGGGCTCTGCCACCTACAACAA
hu. 11-C	692	ATCCCCAATGGCTGGGCGACAGAGTCATCACACAGCAGACCCGAACTGGGCCCTGCCACCTACAACAA
hu. 10-C	692	ATCCCCAATGGCTGGGCGACAGAGTCATCACACAGCAGACCCGAACTGGGCCCTGCCACCTACAACAA
hu. 4-C	692	ATCCCCAATGGCTGGGCGACAGAGTCATCACACAGCAGACCCGAACTGGGCCCTGCCACATACAACAA
rh. 54-D	695	ATCCACATGGCTGGGCGACAGAGTCATCACACAGCAGACCCGAACTGGGCTTTGCCACCTACAACAA
rh. 48-D	695	ATCCACATGGCTGGGCGACAGAGTCATCACACAGCAGACCCGAACTGGGCTTTGCCACCTACAACAA
rh. 55-D	695	ATCCACATGGCTGGGCGACAGAGTCATCACACAGCAGACCCGAACTGGGCTTTGCCACCTACAACAA
rh. 62-D	695	ATCCACATGGCTGGGCGACAGAGTCATCACACAGCAGACCCGAACTGGGCTTTGCCACCTACAACAA
AAV7-D	695	ATCCACATGGCTGGGCGACAGAGTCATTACACAGCAGACCCGAACTGGGCCCTGCCACCTACAACAA
rh. 52-E	695	ATCCACATGGCTGGGCGACAGAGTCATCACACAGCAGACCCGAACTGGGCCCTGCCACCTACAACAA
rh. 51-E	695	ATCCACATGGCTGGGCGACAGAGTCATCACACAGCAGACCCGAACTGGGCCCTGCCACCTACAACAA
hu. 39-E	695	ATCCACATGGCTGGGCGACAGAGTTATCACACAGCAGACCCGAACTGGGCCCTGCCACCTACAACAA
rh. 53-E	695	ATCCACATGGCTGGGCGACAGAGTCATCACACAGCAGACCCGAACTGGGCCCTGCCACCTACAACAA
hu. 37-E	695	ATCCACATGGCTGGGCGACAGAGTCATCACACAGCAGACCCGAACTGGGCCCTGCCACCTACAACAA
rh. 43-E	692	ATCCACATGGCTGGGCGACAGAGTCATCACACAGCAGACCCGAACTGGGCCCTGCCACCTACAACAA
rh. 50-E	695	ATCCACATGGCTGGGCGACAGAGTCATCACACAGCAGACCCGAACTGGGCCCTGCCACCTACAACAA
rh. 49-E	695	ATCCACATGGCTGGGCGACAGAGTCATCACACAGCAGACCCGAACTGGGCCCTGCCACCTACAACAA
rh. 61-E	695	ATCCACATGGCTGGGCGACAGAGTCATCACACAGCAGACCCGAACTGGGCCCTGCCACCTACAACAA
hu. 41-E	695	ATCCACATGGCTGGGCGACAGAGTCATCACACAGCAGACCCGAACTGGGCCCTGCCACCTACAACAA
rh. 64-E	695	ATCCACATGGCTGGGCGACAGAGTCATCACACAGCAGACCCGAACTGGGCCCTGCCACCTACAACAA
hu. 42-E	695	ATCCACATGGCTGGGCGACAGAGTCATCACACAGCAGACCCGAACTGGGCCCTGCCACCTACAACAA
rh. 57-E	695	ATCCACATGGCTGGGCGACAGAGTCATCACACAGCAGACCCGAACTGGGCCCTGCCACCTACAACAA

FIG. 3AD

hu. 40-E	695	ATTCACATGGCTGGCGACAGAGTCA	780	790	800	810	820	830	840
AAV8-E	695	ATTCACATGGCTGGCGACAGAGTCA						
rh. 58-E	695	ATTCACATGGCTGGCGACAGAGTCA						
rh. 40-E	695	ATTCACATGGCTGGCGACAGAGTCA						
hu. 67-E	695	ATTCACATGGCTGGCGACAGAGTCA						
hu. 17-E	695	ATTCACATGGCTGGCGACAGAGTCA						
hu. 6-E	695	ATTCACATGGCTGGCGACAGAGTCA						
hu. 66-E	695	ATTCACATGGCTGGCGACAGAGTCA						
rh. 38-E	695	ATTCACATGGCTGGCGACAGAGTCA						
hu. 32-F	692	ATTCACATGGCTGGCGACAGAGTCA						
AAV9/hu	692	ATTCACATGGCTGGCGACAGAGTCA						
hu. 31-F	692	ATTCACATGGCTGGCGACAGAGTCA						
AAV5	732	CCACAGTACCGAGAGATCAAAAGC---						
AAV3-3	762	CCATCTCTACAAGCAAATCTCC-----						
AAV4-4	744	CCACCTCTACAAGCGACTCGGA-----						
AAV1-A	762	CCACCTCTACAAGCAAATCTCCAGT---						
hu. 46-A	762	CCACCTCTACAAGCAAATCTCCAGT---						
hu. 48-A	762	CCACCTCTACAAGCAAATCTCCAGT---						
hu. 44-A	762	CCACCTCTACAAGCAAATCTCCAGT---						
hu. 43-A	765	CCACCTCTACAAGCAAATCTCCAGT---						
AAV6-A	762	CCACCTCTACAAGCAAATCTCCAGT---						
hu. 34-B	762	CCACCTCTACAAGCAAATCTCCAGT---						
hu. 47-B	762	CCACCTCTACAAGCAAATCTCCAGT---						
hu. 29-B	762	CCATCTGTACAAGCAAATATTC-----						
hu. 63-B	762	CCACCTCTACAAGCAGATTTC-----						
hu. 56-B	762	CCACCTCTACAAGCAGATTTC-----						
hu. 45-B	762	CCACCTCTACAAGCAAATTTCC-----						

FIG. 3AE

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hu. 57-B	759	CCACCTCTACAAGCAGATTTC	-----AGCCAATCAGGAGCCAGCAATGACAACCACTACTTTGGCTAC
hu. 35-B	762	CCACCTCTACAACAAATTTC	-----AGCCAATCAGGAGCCCTCGAACGACAATCACTACTTTGGCTAC
hu. 58-B	762	CCATCTGTACAAGCAGATTTC	-----AGCCAATCAGGAGCCAGCAACGACAACCACTACTTTGGCTAC
hu. 28-B	762	CCATCTGTACAAGCAAAATATCC	-----AGCCAGTCTGGAGCCAGCAACGACAATCACTACTTTGGCTAC
hu. 51-B	762	CCACCTCTACAACAAATTTC	-----AGCCAATCAGGAGCCCTCGAACGACAATCACTACTTTGGCTAC
hu. 19-B	762	CCATCTGTACAAGCAAAATCTCC	-----AGCCAGTCTGGAGCCAGCAACGACAACCACTACTTTGGCTAC
hu. 49-B	762	CCATCTGTACAAGCAGATCTCC	-----AGCCAATCAGGAGCCAGCAACGACAACCACTACTTTGGCTAC
hu. 52-B	762	CCACCTCTACAGACAAATTTC	-----AGCCAATCAGGAGCCCTCGAACGACAATCACTACTTTGGCTAC
hu. 13-B	762	CCATCTCTACAAGCAAAATCTCC	-----AGCCAATCAGGAGCCAGCAACGACAACCACTACTTTGGCTAC
AAV2-B	762	CCACCTCTACAACAAATTTC	-----AGCCAATCAGGAGCCCTCGAACGACAATCACTACTTTGGCTAC
hu. 20-B	762	CCATCTGTACAAGCAAAATCTCC	-----AGCCAGTCTGGAGCCAGCAACGACAACCACTACTTTGGCTAC
hu. 24-B	762	CCATCTGTACAAGCAAAATCTCC	-----AGCCAGTCTGGAGCCAGCAACGACAACCACTACTTTGGCTAC
hu. 64-B	762	CCACCTCTACAGGCAGATTTC	-----AGCCAATCAGGAGCCCTCAAACGACAACCACTACTTTGGCTAC
hu. 27-B	762	CCATCTGTACAAGCAAAATCTCC	-----AGCCAGTCTGGAGCCAGCAACGACAACCACTACTTTGGCTAC
hu. 21-B	762	CCATCTGTACAAGCAAAATCTCC	-----AGCCAGTCTGGAGCCAGCAACGACAACCACTACTTTGGCTAC
hu. 22-B	762	CCATCTGTACAAGCAAAATCTCC	-----AGCCAGTCTGGAGCCAGCAACGACAACCACTACTTTGGCTAC
hu. 23-B	762	CCATCTGTACAAGCAAAATCTCC	-----AGCCAGTCTGGAGCCAGCAACGACAACCACTACTTTGGCTAC
hu. 7-C	762	CCACCTCTACAAGCAAAATCTCA	-----AGCCAATCAGGAGCCCTCAAACGACAACCACTACTTTGGCTAC
hu. 61-C	762	CCACCTCTACAAGCAAAATCTCC	-----AGCCAATCAGGAGCCCTCAAACGACAACCACTACTTTGGCTAC
rh. 56-C	762	CCACCTCTACAAGCAAAATCTCA	-----AGCCAATCAGGAGCCCTCAAACGACAACCACTACTTTGGCTAC
hu. 9-C	762	CCACCTCTACAAGCAAAATCTCC	-----AGCCAATCAGGAGCCCTCGAACGACAACCACTACTTTGGCTGC
hu. 54-C	762	CCACCTTTACAAGCAAAATCTCC	-----AGCCAATCAGGAGCCCTCAAACGACAACCACTACTTTGGCTAC
hu. 53-C	762	CCACCTTTACAAGCAAAATCTCC	-----AGCCAATCAGGAGCCCTCAAACGACAACCACTACTTTGGCTAC
hu. 60-C	762	CCACCTCTACAAGCAAAATCTCC	-----AGCCAATCAGGAGCCCTCAAACGACAACCACTACTTTGGCTAC
hu. 55-C	762	CCACCTTTACAAGCAAAATCTCC	-----AGCCAATCAGGAGCCCTCAAACGACAACCACTACTTTGGCTAC
hu. 2-C	762	CCACCTCTACAAGCAAAATCTCC	-----AGCCAATCAGGAGCCAGCAACGACAACCACTACTTTGGCTAC
hu. 1-C	762	CCACCTCTACAAGCAAAATCTCC	-----AGCCAATCAGGAGCCAGCAACGACAACCACTACTTTGGCTAC
hu. 18-C	762	CCACCTCTACAAGCAAAATCTCC	-----AGCCAATCAGGAGCCCTCAAACGACAACCACTACTTTGGCTAC
hu. 3-C	765	CCACCTCTACAAGCAAAATCTCC	-----AGCCAATCAGGAGCCCTGCAACGACAACCACTACTTTGGCTAC
hu. 25-C	762	CCACCTCTACAAGCAAAATCTCC	-----AGCCAATCAGGAGCCCTCAAACGACAACCACTATTTGGCTAC

FIG. 3AF

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hu.15-C	762	CCACCTCTACAAGCAAATCTCC-----AGCCAAATCAGGAGCCTCAAACGACAACCACTACTTTGGCTAC
hu.16-C	762	CCACCTCTACAAGCAAATCTCC-----AGCCAAATCAGGAGCCTCAAACGACAACCACTACTTTGGCTAC
hu.11-C	762	CCACCTCTACAAGCAAATCTCC-----AGCCAAATCAGGAGCCTCGAACGACAACCACTACTTTGGCTAC
hu.10-C	762	CCACCTCTACAAGCAAATCTCC-----AGCCAAATCAGGAGCCTCGAACGACAACCACTACTTTGGCTAC
hu.4-C	762	CCACCTCTACAAGCAAATCTCC-----AGCCAAATCAGGAGCCTCGAACGACAACCACTACTTTGGCTAC
rh.54-D	765	CCACCTCTACAAGCAAATCTCCAGT---CAGTCAGCAGGTAGCACCAACGACAACGCTACTTTCGGCTAC
rh.48-D	765	CCACCTCTACAAGCAAATCTCCAGT---CAGTCAGCAGGTAGCACCAACGACAACGCTACTTTCGGCTAC
rh.55-D	765	CCACCTCTACAAGCAAATCTCCAGT---CAGTCAGCAGGTAGCACCAACGACAACGCTACTTTCGGCTAC
rh.62-D	765	CCACCTCTACAAGCAAATCTCCAGT---CAGTCAGCAGGTAGCACCAACGACAACGCTACTTTCGGCTAC
AAV7-D	765	CCACCTCTACAAGCAAATCTCCAGT---GAACTGCAGGTAGTACCAACGACAACCACTACTTTGGCTAC
rh.52-E	765	CCACCTCTACAAGCAAATCTCCAACGGGACCTCGGAGGCAGCACCAACGACAACCACTACTTTGGCTAC
rh.51-E	765	CCACCTCTACAAGCAAATCTCCAACGGGACCTCGGAGGCAGCACCAACGACAACCACTACTTTGGCTAC
hu.39-E	765	CCACCTCTACAAGCAAATCTCCAACGGGACCTCGGAGGCAGCACCAACGACAACCACTACTTTGGCTAC
rh.53-E	765	CCACCTCTACAAGCAAATCTCCAACGGGACCTCGGAGGCAGCACCAACGACAACCACTACTTTGGCTAC
hu.37-E	765	CCACCTCTACAAGCAAATCTCCAACGGGACCTCGGAGGCAGCACCAACGACAACCACTACTTTGGCTAC
rh.43-E	762	CCACCTCTACAAGCAAATCTCCAACGGGACCTCGGAGGCAGCACCAACGACAACCACTACTTTGGCTAC
rh.50-E	765	CCACCTCTACAAGCAAATCTCCAACGGGACCTCGGAGGCAGCACCAACGACAACCACTACTTTGGCTAC
rh.49-E	765	CCACCTCTACAAGCAAATCTCCAACGGGACCTCGGAGGCAGCACCAACGACAACCACTACTTTGGCTAC
rh.61-E	765	CCACCTCTACAAGCAAATCTCCAACGGGACCTCGGAGGCAGCACCAACGACAACCACTACTTTGGCTAC
hu.41-E	765	CCACCTCTACAAGCAAATCTCCAATGGACATCGGAGGAGGAGCACCAACGACAACCACTACTTTGGCTAC
rh.64-E	765	CCACCTCTACAAGCAAATCTCCAACGGGACCTCGGAGGCAGCACCAACGACAACCACTACTTTGGCTAC
hu.42-E	765	CCACCTCTACAAGCAAATCTCCAATGGACATCGGAGGAGGAGCACCAACGACAACCACTACTTTGGCTAC
rh.57-E	765	CCACCTCTACAAGCAAACCTCCAACGGGACCTCGGAGGCAGCACCAACGACAACCACTACTTTGGCTAC
hu.40-E	765	CCACCTCTACAAGCAAATCTCCAATGGACATCGGAGGAGGAGCACCAACGACAACCACTACTTTGGCTAC
AAV8-E	765	CCACCTCTACAAGCAAATCTCCAACGGGACCTCGGAGGCAGCACCAACGACAACCACTACTTTGGCTAC
rh.58-E	765	CCACCTCTACAAGCAAATCTCCAACGGGACCTCGGAGGCAGCACCAACGACAACCACTACTTTGGCTAC
rh.40-E	765	CCACCTCTACAAGCAAATCTCCAATGGACATCGGAGGAGGAGCACCAACGACAACCACTACTTTGGCTAC
hu.67-E	765	CCACCTCTACAAGCAAATCTCCAATGGGACATCGGAGGAGGAGCACCAACGACAACCACTACTTTGGCTAC
hu.17-E	765	CCACCTCTACAAGCAAATCTCCAACGGGACATCGGAGGAGGAGCACCAACGACAACCACTACTTTGGCTAC
hu.6-E	765	CCACCTCTACAAGCAAATCTCCAACGGGACATCGGAGGAGGAGCACCAACGACAACCACTACTTTGGCTAC

FIG. 3AG

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hu.66-E	765	CCACCTCTACAAGCAAATATCCAATGGGACATCGGGAGGAAGCACCACGACAACACCTACTTCGGCTAC	850	860	870	880	890	900	910
rh.38-E	765	CCACCTCTACAAGCAAATATCCAATGGGACATCGGGAGGAAGCACCACGACAACACCTACTTCGGCTAC							
hu.32-F	762	TCACCTCTACAAGCAAATCTCCAACAGCACATCTGGAGGATCTTCAAATGACAACGCCCTACTTCGGCTAC							
AAV9/hu	762	TCACCTCTACAAGCAAATCTCCAACAGCACATCTGGAGGATCTTCAAATGACAACGCCCTACTTCGGCTAC							
hu.31-F	762	TCACCTCTACAAGCAAATCTCCAACAGCACATCTGGAGGATCTTCAAATGACAACGCCCTACTTCGGCTAC							
								
AAV5	799	AGCACCCCTTGGGGTACTTTGACTTTAACCCTTCCACAGCCACTGGAGCCCCCGAGACTGGCAAAGAC							
AAV3-3	826	AGCACCCCTTGGGGTATTTTGAATTTAACAAGATTTCCACTGCCACTTCTCACACGCTGACTGGCAGCGAC							
AAV4-4	799	TCCACCCCTTGGGGTACTTTGACTTTCAACCGCTTCCACTGCCACTTCTCACACGCTGACTGGCAGCGAC							
AAV1-A	829	AGCACCCCTTGGGGTATTTTGAATTTCAACAGATTTCCACTGCCACTTTTCAACACGCTGACTGGCAGCGAC							
hu.46-A	829	AGCACCCCTTGGGGTATTTTGAATTTCAACAGATTTCCACTGCCACTTTTCAACACGCTGACTGGCAGCGAC							
hu.48-A	829	GGCACCCCTTGGGGTATTTTGAATTTCAACAGATTTCCACTGCCACTTTTCAACACGCTGACTGGCAGCGAC							
hu.44-A	829	AGCACCCCTTGGGGTATTTTGAATTTCAACAGATTTCCACTGCCACTTTTCAACACGCTGACTGGCAGCGAC							
hu.43-A	832	AGCACCCCTTGGGGTATTTTGAATTTCAACAGATTTCCACTGCCACTTTTCAACACGCTGACTGGCAGCGAC							
AAV6-A	829	AGCACCCCTTGGGGTATTTTGAATTTCAACAGATTTCCACTGCCACTTTTCAACACGCTGACTGGCAGCGAC							
hu.34-B	826	AGCACCCCTTGGGGTATTTTGAATTTCAACAGATTTCCACTGCCACTTTTCAACACGCTGACTGGCAAAGAC							
hu.47-B	826	AGCACCCCTTGGGGTATTTTGAATTTCAACAGATTTCCACTGCCACTTTTCAACACGCTGACTGGCAAAGAC							
hu.29-B	826	AGCACCCCTTGGGGTATTTTGAATTTCAACAGATTTCCACTGCCACTTTTCAACACGCTGACTGGCAAAGAC							
hu.63-B	826	AGCACCCCTTGGGGTATTTTGAATTTCAACAGATTTCCACTGCCACTTTTCAACACGCTGACTGGCAAAGAC							
hu.56-B	826	AGCACCCCTTGGGGTATTTTGAATTTCAACAGATTTCCACTGCCACTTTTCAACACGCTGACTGGCAAAGAC							
hu.45-B	826	AGCACCCCTTGGGGTATTTTGAATTTCAACAGATTTCCACTGCCACTTTTCAACACGCTGACTGGCAAAGAC							
hu.57-B	823	AGCACCCCTTGGGGTATTTTGAATTTCAACAGATTTCCACTGCCACTTTTCAACACGCTGACTGGCAAAGAC							
hu.35-B	826	AGCACCCCTTGGGGTATTTTGAATTTCAACAGATTTCCACTGCCACTTTTCAACACGCTGACTGGCAAAGAC							
hu.58-B	826	AGCACCCCTTGGGGTATTTTGAATTTCAACAGATTTCCACTGCCACTTTTCAACACGCTGACTGGCAAAGAC							
hu.28-B	826	AGCACCCCTTGGGGTATTTTGAATTTCAACAGATTTCCACTGCCACTTTTCAACACGCTGACTGGCAAAGAC							
hu.51-B	826	AGCACCCCTTGGGGTATTTTGAATTTCAACAGATTTCCACTGCCACTTTTCAACACGCTGACTGGCAAAGAC							
hu.19-B	826	AGCACCCCTTGGGGTATTTTGAATTTCAACAGATTTCCACTGCCACTTTTCAACACGCTGACTGGCAAAGAC							
hu.49-B	826	AGCACCCCTTGGGGTATTTTGAATTTCAACAGATTTCCACTGCCACTTTTCAACACGCTGACTGGCAAAGAC							

FIG. 3AH

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hu. 52-B 826 AGCACCCCTTGGGGGTATTTGACTTCAACAGATTCCACTGCCACTTTTCAACACGTGACTGGCAAAGAC
 hu. 13-B 826 AGCACCCCTTGGGGGTATTTGACTTCAACAGATTCCACTGCCACTTTTCAACACGTGACTGGCAAAGAC
 AAV2-B 826 AGCACCCCTTGGGGGTATTTGACTTCAACAGATTCCACTGCCACTTTTCAACACGTGACTGGCAAAGAC
 hu. 20-B 826 AGCACCCCTTGGGGGTATTTGACTTCAACAGATTCCACTGCCACTTTTCAACACGTGACTGGCAAAGAC
 hu. 24-B 826 AGCACCCCTTGGGGGTATTTGACTTCAACAGATTCCACTGCCACTTTTCAACACGTGACTGGCAAAGAC
 hu. 64-B 826 AGCACCCCTTGGGGGTATTTGACTTCAACAGATTCCACTGCCACTTTTCAACACGTGACTGGCAAAGAC
 hu. 27-B 826 AGCACCCCTTGGGGGTATTTGACTTCAACAGATTCCACTGCCACTTTTCAACACGTGACTGGCAAAGAC
 hu. 21-B 826 AGCACCCCTTGGGGGTATTTGACTTCAACAGATTCCACTGCCACTTTTCAACACGTGACTGGCAAAGAC
 hu. 22-B 826 AGCACCCCTTGGGGGTATTTGACTTCAACAGATTCCACTGCCACTTTTCAACACGTGACTGGCAAAGAC
 hu. 23-B 826 AGCACCCCTTGGGGGTATTTGACTTCAACAGATTCCACTGCCACTTTTCAACACGTGACTGGCAAAGAC
 hu. 7-C 826 AGCACCCCTTGGGGGTATTTGACTTCAACAGATTCCACTGCCACTTTTCAACACGTGACTGGCAAAGAC
 hu. 61-C 826 AGCACCCCTTGGGGGTATTTGACTTCAACAGATTCCACTGCCACTTTTCAACACGTGACTGGCAAAGAC
 rh. 56-C 826 AGCACCCCTTGGGGGTATTTGACTTCAACAGATTCCACTGCCACTTTTCAACACGTGACTGGCAAAGAC
 hu. 9-C 826 AGCACCCCTTGGGGGTATTTGACTTCAACAGATTCCACTGCCACTTTTCAACACGTGACTGGCAAAGAC
 hu. 54-C 826 AGCACCCCTTGGGGGTATTTGACTTCAACAGATTCCACTGCCACTTTTCAACACGTGACTGGCAAAGAC
 hu. 53-C 826 AGCACCCCTTGGGGGTATTTGACTTCAACAGATTCCACTGCCACTTTTCAACACGTGACTGGCAAAGAC
 hu. 60-C 826 AGCACCCCTTGGGGGTATTTGACTTCAACAGATTCCACTGCCACTTTTCAACACGTGACTGGCAAAGAC
 hu. 55-C 826 AGCACCCCTTGGGGGTATTTGACTTCAACAGATTCCACTGCCACTTTTCAACACGTGACTGGCAAAGAC
 hu. 2-C 826 AGCACCCCTTGGGGGTATTTGACTTCAACAGATTCCACTGCCACTTTTCAACACGTGACTGGCAAAGAC
 hu. 1-C 826 AGCACCCCTTGGGGGTATTTGACTTCAACAGATTCCACTGCCACTTTTCAACACGTGACTGGCAAAGAC
 hu. 18-C 826 AGCACCCCTTGGGGGTATTTGACTTCAACAGATTCCACTGCCACTTTTCAACACGTGACTGGCAAAGAC
 hu. 3-C 829 AGCACCCCTTGGGGGTATTTGACTTCAACAGATTCCACTGCCACTTTTCAACACGTGACTGGCAAAGAC
 hu. 25-C 826 AGCACCCCTTGGGGGTATTTGACTTCAACAGATTCCACTGCCACTTTTCAACACGTGACTGGCAAAGAC
 hu. 15-C 826 AGCACCCCTTGGGGGTATTTGACTTCAACAGATTCCACTGCCACTTTTCAACACGTGACTGGCAAAGAC
 hu. 16-C 826 AGCACCCCTTGGGGGTATTTGACTTCAACAGATTCCACTGCCACTTTTCAACACGTGACTGGCAAAGAC
 hu. 11-C 826 AGCACCCCTTGGGGGTATTTGACTTCAACAGATTCCACTGCCACTTTTCAACACGTGACTGGCAAAGAC
 hu. 10-C 826 AGCACCCCTTGGGGGTATTTGACTTCAACAGATTCCACTGCCACTTTTCAACACGTGACTGGCAAAGAC
 hu. 4-C 826 AGCACCCCTTGGGGGTATTTGACTTCAACAGATTCCACTGCCACTTTTCAACACGTGACTGGCAAAGAC
 rh. 54-D 832 AGCACCCCTTGGGGGTATTTGACTTCAACAGATTCCACTGCCACTTTTCAACACGTGACTGGCAAAGAC
 rh. 48-D 832 AGCACCCCTTGGGGGTATTTGACTTCAACAGATTCCACTGCCACTTTTCAACACGTGACTGGCAAAGAC

FIG. 3A1

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rh. 55-D	832	AGACCCCCCTGGGGGTATTTTGACTTCAACAGATTCCACTGTCACTTCTCACCACGTGACTGGCAGCGGC	920
rh. 62-D	832	AGACCCCCCTGGGGGTATTTTGACTTCAACAGATTCCACTGTCACTTCTCACCACGTGACTGGCAGCGGC	930
AAV7-D	832	AGACCCCCCTGGGGGTATTTTGACTTCAACAGATTCCACTGCCACTTCTCACCACGTGACTGGCAGCGAC	940
rh. 52-E	835	AGACCCCCCTGGGGGTATTTTGACTTCAACAGATTCCACTGCCACTTCTCACCACGTGACTGGCAGCGAC	950
rh. 51-E	835	AGACCCCCCTGGGGGTATTTTGACTTCAACAGATTCCACTGCCACTTCTCACCACGTGACTGGCAGCGAC	960
hu. 39-E	835	AGACCCCCCTGGGGGTATTTTGACTTCAACAGATTCCACTGCCACTTCTCACCACGTGACTGGCAGCGAC	970
rh. 53-E	835	AGACCCCCCTGGGGGTATTTTGACTTCAACAGATTCCACTGCCACTTCTCACCACGTGACTGGCAGCGAC	980
hu. 37-E	835	AGACCCCCCTGGGGGTATTTTGACTTCAACAGATTCCACTGCCACTTCTCACCACGTGACTGGCAGCGAC	
rh. 43-E	832	AGACCCCCCTGGGGGTATTTTGACTTCAACAGATTCCACTGCCACTTCTCACCACGTGACTGGCAGCGAC	
rh. 50-E	835	AGACCCCCCTGGGGGTATTTTGACTTCAACAGATTCCACTGCCACTTCTCACCACGTGACTGGCAGCGAC	
rh. 49-E	835	AGACCCCCCTGGGGGTATTTTGACTTCAACAGATTCCACTGCCACTTCTCACCACGTGACTGGCAGCGAC	
rh. 61-E	835	AGACCCCCCTGGGGGTATTTTGACTTCAACAGATTCCACTGCCACTTCTCACCACGTGACTGGCAGCGAC	
hu. 41-E	835	AGACCCCCCTGGGGGTATTTTGACTTCAACAGATTCCACTGCCACTTCTCACCACGTGACTGGCAGCGAC	
rh. 64-E	835	AGACCCCCCTGGGGGTATTTTGACTTCAACAGATTCCACTGCCACTTCTCACCACGTGACTGGCAGCGAC	
hu. 42-E	835	AGACCCCCCTGGGGGTATTTTGACTTCAACAGATTCCACTGCCACTTCTCACCACGTGACTGGCAGCGAC	
rh. 57-E	835	AGACCCCCCTGGGGGTATTTTGACTTCAACAGATTCCACTGCCACTTCTCACCACGTGACTGGCAGCGAC	
hu. 40-E	835	AGACCCCCCTGGGGGTATTTTGACTTCAACAGATTCCACTGCCACTTCTCACCACGTGACTGGCAGCGAC	
AAV8-E	835	AGACCCCCCTGGGGGTATTTTGACTTCAACAGATTCCACTGCCACTTCTCACCACGTGACTGGCAGCGAC	
rh. 58-E	835	AGACCCCCCTGGGGGTATTTTGACTTCAACAGATTCCACTGCCACTTCTCACCACGTGACTGGCAGCGAC	
rh. 40-E	835	AGACCCCCCTGGGGGTATTTTGACTTCAACAGATTCCACTGCCACTTCTCACCACGTGACTGGCAGCGAC	
hu. 67-E	835	AGACCCCCCTGGGGGTATTTTGACTTCAACAGATTCCACTGCCACTTCTCACCACGTGACTGGCAGCGAC	
hu. 17-E	835	AGACCCCCCTGGGGGTATTTTGACTTCAACAGATTCCACTGCCACTTCTCACCACGTGACTGGCAGCGAC	
hu. 6-E	835	AGACCCCCCTGGGGGTATTTTGACTTCAACAGATTCCACTGCCACTTCTCACCACGTGACTGGCAGCGAC	
hu. 66-E	835	AGACCCCCCTGGGGGTATTTTGACTTCAACAGATTCCACTGCCACTTCTCACCACGTGACTGGCAGCGAC	
rh. 38-E	835	AGACCCCCCTGGGGGTATTTTGACTTCAACAGATTCCACTGCCACTTCTCACCACGTGACTGGCAGCGAC	
hu. 32-F	832	AGACCCCCCTGGGGGTATTTTGACTTCAACAGATTCCACTGCCACTTCTCACCACGTGACTGGCAGCGAC	
AAV9/hu	832	AGACCCCCCTGGGGGTATTTTGACTTCAACAGATTCCACTGCCACTTCTCACCACGTGACTGGCAGCGAC	
hu. 31-F	832	AGACCCCCCTGGGGGTATTTTGACTTCAACAGATTCCACTGCCACTTCTCACCACGTGACTGGCAGCGAC	

FIG. 3A

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AAV5	869	TCATCAACAACACTGGGGCTTCAGACCCCGGTCCCTCAGAGTCAAAATCTTCAACATTCAAAGTCAAAGA
AAV3-3	896		TCATTAAACAACAACACTGGGGATTCGGGCCCAAGAAACTCAGCTTCAAGCTCTTCAACATCCAAGTTAGAGG
AAV4-4	869		TCATCAACAACAACACTGGGGCATGCGACCCCAAGCCATGCGGTCAAAATCTTCAACATCCAGGTCAAGGA
AAV1-A	899		TCATCAACAACAATTTGGGGATTCGGGCCCAAGAGACTCAACTTCAAACTCTTCAACATCCAAGTCAAGGA
hu.46-A	899		TCATCAACAACAATTTGGGGATTCGGGCCCAAGAGACTCAACTTCAAACTCTTCAACATCCAAGTCAAGGA
hu.48-A	899		TCATCAACAACAATTTGGGGATTCGGGCCCAAGAGACTCAACTTCAAACTCTTCAACATCCAAGTCAAGGA
hu.44-A	899		TCATCAACAACAATTTGGGGATTCGGGCCCAAGAGACTCAACTTCAAACTCTTCAACATCCAAGTCAAGGA
hu.43-A	902		TCATCAACAACAATTTGGGGATTCGGGCCCAAGAGACTCAACTTCAAACTCTTCAACATCCAAGTCAAGGA
AAV6-A	899		TCATCAACAACAATTTGGGGATTCGGGCCCAAGAGACTCAACTTCAAGCTCTTCAACATCCAAGTCAAGGA
hu.34-B	896		TCATCAACAACAACACTGGGGATTCGGACCCCAAGAGACTCAACTTCAAGCTCTTAAACATTTCAAGTCAAAGA
hu.47-B	896		TCATCAACAACAACACTGGGGATTCGGACCCCAAGAGACTCAACTTCAAGCTCTTAAACATTTCAAGTCAAAGA
hu.29-B	896		TCATCAACAACAATTTGGGGATTCGGGCCCAAGAGACTCAACTTCAAGCTCTTAAACATTTCAAGTCAAAGA
hu.63-B	896		TCATCAACAACAATTTGGGGATTCGGGCCCAAGAGACTCAACTTCAAGCTCTTAAACATTTCAAGTCAAAGA
hu.56-B	896		TCATCAACAACAACACTGGGGATTCGGGCCCAAGAGACTCAACTTCAAGCTGTTAAACATTTCAAGTCAAAGA
hu.45-B	896		TCATCAACAACAACACTGGGGATTCGGACCCCAAGAGACTCAACTTCAAGCTCTTAAACATTTCAAGTCAAAGA
hu.57-B	893		TCATCAACAACAACACTGGGGATTCGGGCCCAAGAGACTCAACTTCAAGCTGTTAAACATTTCAAGTCAAAGA
hu.35-B	896		TCATCAACAACAACACTGGGGATTCGGACCCCAAGAGACTCAACTTCAAGCTCTTAAACATTTCAAGTCAAAGA
hu.58-B	896		TCATCAACAACAACACTGGGGATTCGGGCCCAAGAGACTCAACTTCAAGCTCTTAAACATTTCAAGTCAAAGA
hu.28-B	896		TCATCAACAACAACACTGGGGATTCGGACCCCAAGAGACTCAACTTCAAGCTCTTAAACATTTCAAGTCAAAGA
hu.51-B	896		TCATCAACAACAACACTGGGGATTCGGACCCCAAGAGACTCAACTTCAAGCTCTTAAACATTTCAAGTCAAAGA
hu.19-B	896		TCATCAACAACAACACTGGGGATTCGGGCCCAAGAGACTCAGCTTCAAGCTCTTAAACATTTCAAGTCAAAGA
hu.49-B	896		TCATCAACAACAACACTGGGGATTCGGGCCCAAGAGACTCAACTTCAAGCTCTTAAACATTTCAAGTCAAAGA
hu.52-B	896		TCATCAACAACAACACTGGGGATTCGGACCCCAAGAGACTCAACTTCAAGCTCTTAAACATTTCAAGTCAAAGA
hu.13-B	896		TCATCAACAACAACACTGGGGATTCGGGCCCAAGAGACTCAACTTCAAGCTCTTAAACATTTCAAGTCAAAGA
AAV2-B	896		TCATCAACAACAACACTGGGGATTCGGGCCCAAGAGACTCAGCTTCAAGCTCTTAAACATTTCAAGTCAAAGA
hu.20-B	896		TCATCAACAACAACACTGGGGATTCGGGCCCAAGAGACTCAGCTTCAAGCTCTTAAACATTTCAAGTCAAAGA
hu.24-B	896		TCATCAACAACAACACTGGGGATTCGGGCCCAAGAGACTCAGCTTCAAGCTCTTAAACATTTCAAGTCAAAGA
hu.64-B	896		TCATCAACAACAATTTGGGGATTCGGGCCCAAGAGACTCAACTTCAAGCTCTTAAACATTTCAAGTCAAAGA
hu.27-B	896		TCATCAACAACAACACTGGGGATTCGGGCCCAAGAGACTCAGCTTCAAGCTCTTAAACATTTCAAGTCAAAGA

FIG. 3AK

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hu. 21-B	896	TCATCAACAACAACTGGGGATTCCGGGCCCCAAGAGACTCAGCTTCAAGCTCTTTAACAATTCAAGTCAAAGA
hu. 22-B	896	TCATCAACAACAACAACTGGGGATTCCGGGCCCCAAGAGACTCAGCTTCAAGCTCTTTAACAATTCAAGTCAAAGA
hu. 23-B	896	TCATCAACAACAACAACTGGGGATTCCGGGCCCCAAGAGACTCAGCTTCAAGCTCTTTAACAATTCAAGTCAAAGA
hu. 7-C	896	TCATCAACAACAACAACTGGGGATTCCGACCCCAAGAGACTCAACTTCAAGCTCTTTAACAATTCAAGTCAAAGA
hu. 61-C	896	TCATCAACAACAACAACTGGGGATTCCGACCCCAAGAGACTCAACTTCAAGCTCTTTAACAATTCAAGTCAAAGA
rh. 56-C	896	TCATCAACAACAACAACTGGGGATTCCGACCCCAAGAGACTCAACTTCAAGCTCTTTAACAATTCAAGTCAAAGA
hu. 9-C	896	TCATCAACAACAACAACTGGGGATTCCGACCCCAAGAGACTCAACTTCAAGCTCTTTAACAATTCAAGTCAAAGA
hu. 54-C	896	TCATCAACAACAACAACTGGGGATTCCGACCCCAAGAGACTCAACTTCAAGCTCTTTAACAATTCAAGTCAAAGA
hu. 53-C	896	TCATCAACAACAACAACTGGGGATTCCGACCCCAAGAGACTCAACTTCAAGCTCTTTAACAATTCAAGTCAAAGA
hu. 60-C	896	TCATCAACAACAACAACTGGGGATTCCGACCCCAAGAGACTCAACTTCAAGCTCTTTAACAATTCAAGTCAAAGA
hu. 55-C	896	TCATCAACAACAACAACTGGGGATTCCGACCCCAAGAGACTCAACTTCAAGCTCTTTAACAATTCAAGTCAAAGA
hu. 2-C	896	TCATCAACAACAACAACTGGGGATTCCGGGCCCCAAGAGACTCAACTTCAAGCTCTTTAATAATTCAAGTCAAAGA
hu. 1-C	896	TCATCAACAACAACAACTGGGGATTCCGGGCCCCAAGAGACTCAACTTCAAGCTCTTTAATAATTCAAGTCAAAGA
hu. 18-C	896	TCATCAACAACAACAGCTGGGGATTCCGACCCCAAGAGACTCAACTTCAAGCTCTTTAACAATTCAAGTCAAAGA
hu. 3-C	899	TCATCAACAGCAACTGGGGATTCCGGGCCCCAAGAGACTCAACTTCAAGCTCTTTAATAATTCAAGTCAAAGA
hu. 25-C	896	TCATCAACAACAACAACTGGGGATTCCGACCCCAAGAGACTCAACTTCAAGCTCTTTAACAATTCAAGTCAAAGA
hu. 15-C	896	TCATCAACAACAACAACTGGGGATTCCGACCCCAAGAGACTCAACTTCAAGCTCTTTAACAATTCAAGTCAAAGA
hu. 16-C	896	TCATCAACAACAACAACTGGGGATTCCGACCCCAAGAGACTCAACTTCAAGCTCTTTAACAATTCAAGTCAAAGA
hu. 11-C	896	TCATCAACAACAACAACTGGGGATTCCGACCCCAAGAGACTCAACTTCAAGCTCTTTAACAATTCAAGTCAAAGA
hu. 10-C	896	TCATCAACAACAACAACTGGGGATTCCGACCCCAAGAGACTCAACTTCAAGCTCTTTAACAATTCAAGTCAAAGA
hu. 4-C	896	TCATCAACAACAACAACTGGGGATTCCGGGCCCCAAGAGACTCAACTTCAAGCTCTTTAATAATTCAAGTCAAAGA
rh. 54-D	902	TCATCAACAACAACAACTGGGGATTCCGGGCCCCAAGAGACTCAACTTCAAGCTCTTTAACAATTCAAGTCAAAGA
rh. 48-D	902	TCATCAACAACAACAACTGGGGATTCCGGGCCCCAAGAGACTCAACTTCAAGCTCTTTAACAATTCAAGTCAAAGA
rh. 55-D	902	TCATCAACAACAACAACTGGGGATTCCGGGCCCCAAGAGACTCAACTTCAAGCTCTTTAACAATTCAAGTCAAAGA
rh. 62-D	902	TCATCAACAACAACAACTGGGGATTCCGGGCCCCAAGAGACTCAACTTCAAGCTCTTTAACAATTCAAGTCAAAGA
AAV7-D	902	TCATCAACAACAACAACTGGGGATTCCGGGCCCCAAGAGACTCAACTTCAAGCTCTTTAACAATTCAAGTCAAAGA
rh. 52-E	905	TCATCAACAACAACAACTGGGGATTCCGGGCCCCAAGAGACTCAACTTCAAGCTCTTTAACAATTCAAGTCAAAGA
rh. 51-E	905	TCATCAACAACAACAACTGGGGATTCCGGGCCCCAAGAGACTCAACTTCAAGCTCTTTAACAATTCAAGTCAAAGA
hu. 39-E	905	TCATCAACAACAACAACTGGGGATTCCGGGCCCCAAGAGACTCAACTTCAAGCTCTTTAACAATTCAAGTCAAAGA
rh. 53-E	905	TCATCAACAACAACAACTGGGGATTCCGGGCCCCAAGAGACTCAACTTCAAGCTCTTTAACAATTCAAGTCAAAGA

FIG. 3AL

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hu. 37-E	905	TCATCAACAACAAC	TGGGATTCCGGCCAAAAGACTCAGCTTCAAGCTCTTCAACATCCAGGTCAAAGGA
rh. 43-E	902	TCATCAACAACAAC	TGGGATTCCGGCCCAAAGAGACTCAGCTTCAAGCTCTTCAACATCCAGGTCAAAGGA
rh. 50-E	905	TCATCAACAACAAC	TGGGATTCCGGCCCAAAGAGACTCAGCTTCAAGCTCTTCAACATCCAGGTCAAAGA
rh. 49-E	905	TCATCAACAACAAC	TGGGATTCCGGCCCAAAGAGACTCAGCTTCAAGCTCTTCAACATCCAGGTCAAAGA
rh. 61-E	905	CCATCAACAACAAC	TGGGATTCCGGCCCAAAGAGACTCAGCTTCAAGCTCTTCAACATCCAGGTCAAAGA
hu. 41-E	905	TCATCAACAACAAC	TGGGATTCCGGCCCAAAGAGACTCAGCTTCAAGCTCTTCAACATCCAGGTCAAAGGA
rh. 64-E	905	TCATCAACAACAAC	TGGGATTCCGGCCCAAAGAGACTCAGCTTCAAGCTCTTCAACATCCAGGTCAAAGA
hu. 42-E	905	TCATCAACAACAAC	TGGGATTCCGGCCCAAAGAGACTCAGCTTCAAGCTCTTCAACATCCAGGTCAAAGGA
rh. 57-E	905	TCATCAACAACAAC	TGGGATTCCGGCCCAAAGAGACTCAGCTTCAAGCTCTTCAACATCCAGGTCAAAGGA
hu. 40-E	905	TCATCAACAACAAC	TGGGATTCCGGCCCAAAGAGACTCAGCTTCAAGCTCTTCAACATCCAGGTCAAAGGA
AAV8-E	905	TCATCAACAACAAC	TGGGATTCCGGCCCAAAGAGACTCAGCTTCAAGCTCTTCAACATCCAGGTCAAAGGA
rh. 58-E	905	TCATCAACAACAAC	TGGGATTCCGGCCCAAAGAGACTCAGCTTCAAGCTCTTCAACATCCAGGTCAAAGGA
rh. 40-E	905	TCATCAACAACAAC	TGGGATTCCGGCCCAAAGAGACTCAGCTTCAAGCTCTTCAACATCCAGGTCAAAGGA
hu. 67-E	905	TCATCAACAACAAC	TGGGATTCCGGCCCAAAGAGACTCAGCTTCAAGCTCTTCAACATCCAGGTCAAAGGA
hu. 17-E	905	TCATCAACAACAAC	TGGGATTCCGGCCCAAAGAGACTCAACTTCAAGCTCTTCAACATCCAGGTCAAAGGA
hu. 6-E	905	TCATCAACAACAAC	TGGGATTCCGGCCCAAAGAGACTCAACTTCAAGCTCTTCAACATCCAGGTCAAAGGA
hu. 66-E	905	TCATCAACAACAAC	TGGGATTCCGGCCCAAAGAGACTCAGCTTCAAGCTCTTCAACATCCAGGTCAAAGGA
rh. 38-E	905	TCATCAACAACAAC	TGGGATTCCGGCCCAAAGAGACTCAGCTTCAAGCTCTTCAACATCCAGGTCAAAGGA
hu. 32-F	902	TCATCAACAACAAC	TGGGATTCCGGCCCAAAGAGACTCAACTTCAAGCTCTTCAACATCCAGGTCAAAGA
AAV9/hu	902	TCATCAACAACAAC	TGGGATTCCGGCCCAAAGAGACTCAACTTCAAGCTCTTCAACATCCAGGTCAAAGA
hu. 31-F	902	TCATCAACAACAAC	TGGGATTCCGGCCCAAAGAGACTCAACTTCAAGCTCTTCAACATCCAGGTCAAAGA
AAV5	939	GGTCACGGTGCAGGACTCCACCACCA	CCATCGCCAAACAACCTCACCTCCACCGTCCAAGTGTTCACGGAC
AAV3-3	966	GGTCACGCAGAACGATGGCAGCAGACTAT	TGCCAATAAACCTTACCAGCACGGTTCAAAGTGTTCACGGAC
AAV4-4	939	GGTCACGACGTCGAACGGCGAGACAACGGTGGCTAA	TAAACCTTACCAGCACGGTTCAGATCTTTGCGGAC
AAV1-A	969	GGTCACGACGAATGATGGCGTCACAACCAATCGCTAAT	AACCTTACCAGCACGGTTCAGTCTTCTCGGAC
hu. 46-A	969	GGTCACGACGAATGATGGCGTCACAACCAATCGCTAAT	AACCTTACCAGCACGGTTCAGTCTTCTCGGAC
hu. 48-A	969	GGTCACGACGAATGATGGCGTCACAACCAATCGCTAAT	AACCTTACCAGCACGGTTCAGTCTTCTCGGAC

FIG. 3AM

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hu. 44-A	969	GGTCACGACGAATGATGGCGTCACAACCATCGCTAATAAACCTTACCAGCACGGTTC AAGTCTTCTCTCGGAC
hu. 43-A	972	GGTCACGACGAATGATGGCGTCACAACCATCGCTAATAAACCTTACCAGCACGGTTC AAGTCTTCTCTCGGAC
AAV6-A	969	GGTCACGACGAATGATGGCGTCACGACCATCGCTAATAAACCTTACCAGCACGGTTC AAGTCTTCTCTCGGAC
hu. 34-B	966	GGTCACGACGAATGACGGTACGACGACGATTGCCAATAAACCTTACCAGCACGGTTC AAGTGTTTTACTGAC
hu. 47-B	966	GGTCACGACGAATGACGGTACGACGACGATTGCCAATAAACCTTACCAGCACGGTTC AAGTGTTTTACTGAC
hu. 29-B	966	GGTCACGACGAATGACGGTACGACGACGATTGCCAATAAACCTTACCAGCACGGTTC AAGTGTTTTACTGAC
hu. 63-B	966	GGTCACGACGAATGACGGTACGACGACGATTGCCAATAAACCTTACCAGCACGGTTC AAGTGTTTTACTGAC
hu. 56-B	966	GGTCACGACGAATGACGGTACGACGACGATTGCCAATAAACCTTACCAGCACGGTTC AAGTGTTTTACTGAC
hu. 45-B	966	GGTCACGACGAATGACGGTACGACGACGATTGCCAATAAACCTTACCAGCACGGTTC AAGTGTTTTACTGAC
hu. 57-B	963	GGTCACGACGAATGACGGTACGACGACGATTGCCAATAAACCTTACCAGCACGGTTC AAGTGTTTTACTGAC
hu. 35-B	966	GGTCACGACGAATGACGGTACGACGACGATTGCCAATAAACCTTACCAGCACGGTTC AAGTGTTTTACTGAC
hu. 58-B	966	GGTCACGACGAATGATGGTACGACGACGATTGCCAATAAACCTTACCAGCACGGTTC AAGTGTTTTACTGAC
hu. 28-B	966	GGTCACGACGAATGACGGTACGACGACGATTGCCAATAAACCTTACCAGCACGGTTC AAGTGTTTTACTGAC
hu. 51-B	966	GGTCACGACGAATGACGGTACGACGACGATTGCCAATAAACCTTACCAGCACGGTTC AAGTGTTTTACTGAC
hu. 19-B	966	GGTCACGACGAATGACGGTACGACGACGATTGCCAATAAACCTTACCAGCACGGTTC AAGTGTTTTACTGAC
hu. 49-B	966	GGTCACGACGAATGACGGTACGACGACGATTGCCAATAAACCTTACCAGCACGGTTC AAGTGTTTTACTGAC
hu. 52-B	966	GGTCACGACGAATGACGGTACGACGACGATTGCCAATAAACCTTACCAGCACGGTTC AAGTGTTTTACTGAC
hu. 13-B	966	GGTCACGACGAATGACGGTACGACGACGATTGCCAATAAACCTTACCAGCACGGTTC AAGTGTTTTACTGAC
AAV2-B	966	GGTCACGACGAATGACGGTACGACGACGATTGCCAATAAACCTTACCAGCACGGTTC AAGTGTTTTACTGAC
hu. 20-B	966	GGTCACGACGAATGACGGTACGACGACGATTGCCAATAAACCTTACCAGCACGGTTC AAGTGTTTTACTGAC
hu. 24-B	966	GGTCACGACGAATGACGGTACGACGACGATTGCCAATAAACCTTACCAGCACGGTTC AAGTGTTTTACTGAC
hu. 64-B	966	GGTCACGACGAATGACGGTACGACGACGATTGCCAATAAACCTTACCAGCACGGTTC AAGTGTTTTACTGAC
hu. 27-B	966	GGTCACGACGAATGACGGTACGACGACGATTGCCAATAAACCTTACCAGCACGGTTC AAGTGTTTTACTGAC
hu. 21-B	966	GGTCACGACGAATGACGGTACGACGACGATTGCCAATAAACCTTACCAGCACGGTTC AAGTGTTTTACTGAC
hu. 22-B	966	GGTCACGACGAATGACGGTACGACGACGATTGCCAATAAACCTTACCAGCACGGTTC AAGTGTTTTACTGAC
hu. 23-B	966	GGTCACGACGAATGACGGTACGACGACGATTGCCAATAAACCTTACCAGCACGGTTC AAGTGTTTTACTGAC
hu. 7-C	966	GGTCACGACGAATGACGGTACGACGACGATTGCCAATAAACCTTACCAGCACGGTTC AAGTGTTTTACTGAC
hu. 61-C	966	GGTCACGACGAATGACGGTACGACGACGATTGCCAATAAACCTTACCAGCACGGTTC AAGTGTTTTACTGAC
rh. 56-C	966	GGTCACGACGAATGACGGTACGACGACGATTGCCAATAAACCTTACCAGCACGGTTC AAGTGTTTTACTGAC
hu. 9-C	966	GGTCACGACGAATGACGGTACGACGACGATTGCCAATAAACCTTACCAGCACGGTTC AAGTGTTTTACTGAC

FIG. 3A2

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hu. 54-C	966	GGTCACGCAGAAATGACGGTACGACGACGATTGCCAATAAACCTTACCAGCACGGTTCAGGTGTTTACTGAC
hu. 53-C	966	GGTCACGCAGAAATGACGGTACGACGACGATTGCCAATAAACCTTACCAGCACGGTTCAGGTGTTTACTGAC
hu. 60-C	966	GGTCACGCAGAAATGACGGTACGACGACGATTGCCAATAAACCTTACCAGCACGGTTCAGGTGTTTACTGAC
hu. 55-C	966	GGTCACGCAGAAATGACGGTACGACGACGATTGCCAATAAACCTTACCAGCACGGTTCAGGTGTTTACTGAC
hu. 2-C	966	GGTCACGCAGAAATGACGGTACGACGACGATTGCCAATAAACCTTACCAGCACGGTTCAGGTGTTTACTGAC
hu. 1-C	966	GGTCACGCAGAAATGACGGTACGACGACGATTGCCAATAAACCTTACCAGCACGGTTCAGGTGTTTACTGAC
hu. 18-C	966	GGTCACGCAGAAATGACGGTACGACGACGATTGCCAATAAACCTTACCAGCACGGTTCAGGTGTTTACTGAC
hu. 3-C	969	GGTCACGCAGAAATGACGGTACGACGACGATTGCCAATAAACCTTACCAGCACGGTTCAGGTGTTTACTGAC
hu. 25-C	966	GGTCACGCAGAAATGACGGTACGACGACGATTGCCAATAAACCTTACCAGCACGGTTCAGGTGTTTACTGAC
hu. 15-C	966	GGTCACGCAGAAATGACGGTACGACGACGATTGCCAATAAACCTTACCAGCACGGTTCAGGTGTTTACTGAC
hu. 16-C	966	GGTCACGCAGAAATGACGGTACGACGACGATTGCCAATAAACCTTACCAGCACGGTTCAGGTGTTTACTGAC
hu. 11-C	966	GGTCACGCAGAAATGACGGTACGACGACGATTGCCAATAAACCTTACCAGCACGGTTCAGGTGTTTACTGAC
hu. 10-C	966	GGTCACGCAGAAATGACGGTACGACGACGATTGCCAATAAACCTTACCAGCACGGTTCAGGTGTTTACTGAC
hu. 4-C	966	GGTCACGCAGAAATGACGGTACGACGACGATTGCCAATAAACCTTACCAGCACGGTTCAGGTGTTTACTGAC
rh. 54-D	972	GGTCACGCAGAAATGACGGCGTCACGACCATCGCTAATAAACCTTACCAGCACGGTTCAGGTGTTTCTCGGAC
rh. 48-D	972	GGTCACAAACGAATGACGGCGTCACGACCATCGCTAATAAACCTTACCAGCACGGTTCAGGTGTTTCTCGGAC
rh. 55-D	972	GGTCACAAACGAATGACGGCGTCACGACCATCGCTAATAAACCTTACCAGCACGGTTCAGGTGTTTCTCGGAC
rh. 62-D	972	GGTCACAAACGGGTGACGGCGTCACGACCATCGCTAATAAACCTTACCAGCACGGTTCAGGTGTTTCTCGGAC
AAV7-D	972	GGTCACGCAGAAATGACGGCGTTACGACCATCGCTAATAAACCTTACCAGCACGGTTCAGGTGTTTCTCGGAC
rh. 52-E	975	GGTCACGCAGAAATGAAGGCCAAGACCATCGCTAATAAACCTTACCAGCACGGTTCAGGTGTTTCTCGGAC
rh. 51-E	975	GGTCACGCAGAAATGAAGGCCAAGACCATCGCTAATAAACCTTACCAGCACGGTTCAGGTGTTTCTCGGAC
hu. 39-E	975	GGTCACGCAGAAATGAAGGCCAAGACCATCGCTAATAAACCTTACCAGCACGGTTCAGGTGTTTCTCGGAC
rh. 53-E	975	GGTCACGCAGAAATGAAGGCCAAGACCATCGCTAATAAACCTTACCAGCACGGTTCAGGTGTTTCTCGGAC
hu. 37-E	975	GGTCACGCAGAAATGAAGGCCAAGACCATCGCTAATAAACCTTACCAGCACGGTTCAGGTGTTTCTCGGAC
rh. 43-E	972	GGTCACGCAGAAATGAAGGCCAAGACCATCGCTAATAAACCTTACCAGCACGGTTCAGGTGTTTCTCGGAC
rh. 50-E	975	GGTCACGCAGAAATGAAGGCCAAGACCATCGCTAATAAACCTTACCAGCACGGTTCAGGTGTTTCTCGGAC
rh. 49-E	975	GGTCACGCAGAAATGAAGGCCAAGACCATCGCTAATAAACCTTACCAGCACGGTTCAGGTGTTTCTCGGAC
rh. 61-E	975	GGTCACGCAGAAATGAAGGCCAAGACCATCGCTAATAAACCTTACCAGCACGGTTCAGGTGTTTCTCGGAC
hu. 41-E	975	GGTCACGCAGAAATGAAGGCCAAGACCATCGCTAATAAACCTTACCAGCACGGTTCAGGTGTTTCTCGGAC
rh. 64-E	975	GGTCACGCAGAAATGAAGGCCAAGACCATCGCTAATAAACCTTACCAGCACGGTTCAGGTGTTTCTCGGAC

FIG. 3AO

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hu.42-E	975	GGTCACGCAGAAATGAAGGCACCAAGACCATCGCCCAATAACCTTACCAGCACGATTTCAGGTATTACGGAC	1060	1070	1080	1090	1100	1110	1120
rh.57-E	975	GGTCACGCAGAAATGAAGGCACCAAGACCATCGCCCAATAACCTTACCAGCACGATTTCAGGTATTACGGAC							
hu.40-E	975	GGTCACGCAGAAATGAAGGCACCAAGACCATCGCCCAATAACCTTACCAGCACGATTTCAGGTATTACGGAC							
AAV8-E	975	GGTCACGCAGAAATGAAGGCACCAAGACCATCGCCCAATAACCTTACCAGCACGATTTCAGGTATTACGGAC							
rh.58-E	975	GGTCACGCAGAAATGAAGGCACCAAGACCATCGCCCAATAACCTTACCAGCACGATTTCAGGTATTACGGAC							
rh.40-E	975	GGTCACGCAGAAATGAAGGCACCAAGACCATCGCCCAATAACCTTACCAGCACGATTTCAGGTATTACGGAC							
hu.67-E	975	GGTCACGCAGAAATGAAGGCACCAAGACCATCGCCCAATAACCTTACCAGCACGATTTCAGGTATTACGGAC							
hu.17-E	975	GGTCACGCAGAAATGAAGGCACCAAGACCATCGCCCAATAACCTTACCAGCACGATTTCAGGTATTACGGAC							
hu.6-E	975	GGTCACGCAGAAATGAAGGCACCAAGACCATCGCCCAATAACCTTACCAGCACGATTTCAGGTATTACGGAC							
hu.66-E	975	GGTCACGCAGAAATGAAGGCACCAAGACCATCGCCCAATAACCTTACCAGCACGATTTCAGGTATTACGGAC							
rh.38-E	975	GGTCACGCAGAAATGAAGGCACCAAGACCATCGCCCAATAACCTTACCAGCACGATTTCAGGTATTACGGAC							
hu.32-F	972	GGTTACGGACAACAATGGAGTCAAGACCATCGCCCAATAACCTTACCAGCACGATTTCAGGTATTACGGAC							
AAV9/hu	972	GGTTACGGACAACAATGGAGTCAAGACCATCGCCCAATAACCTTACCAGCACGATTTCAGGTATTACGGAC							
hu.31-F	972	GGTTACGGACAACAATGGAGTCAAGACCATCGCCCAATAACCTTACCAGCACGATTTCAGGTATTACGGAC							
AAV5	1009	GACGACTACCAGCTGCCCCACGTCTCGGCAACGGGACCGAGGGATGCCTGCCGGCCTTCCCTCCGCAGG							
AAV3-3	1036	TCGGAGTATCAGCTCCCGTACGTGCTCGGGTCGGCGCACCAAGGTGTCTCCCGCCGTTTCCAGCGGACG							
AAV4-4	1009	TCGTCTGTACGAACCTGCCGTACGTGATGGATCGGGTCAAGAGGGCAGCCTGCCCTCTTCCCAACGACG							
AAV1-A	1039	TCGGAGTACCAGCTTCCGTACGTCTCGGCTCTGCGCACCAAGGGTGCCTCCCTCCGTCCCGGCGGACG							
hu.46-A	1039	TCGGAGTACCAGCTTCCGTACGTCTCGGCTCTGCGCACCAAGGGTGCCTCCCTCCGTCCCGGCGGACG							
hu.48-A	1039	TCGGAGTACCAGCTTCCGTACGTCTCGGCTCTGCGCACCAAGGGTGCCTCCCTCCGTCCCGGCGGACG							
hu.44-A	1039	TCGGAGTACCAGCTTCCGTACGTCTCGGCTCTGCGCACCAAGGGTGCCTCCCTCCGTCCCGGCGGACG							
hu.43-A	1042	TCGGAGTACCAGCTTCCGTACGTCTCGGCTCTGCGCACCAAGGGTGCCTCCCTCCGTCCCGGCGGACG							
AAV6-A	1039	TCGGAGTACCAGTTGCCGTACGTCTCGGCTCTGCGCACCAAGGGTGCCTCCCTCCGTCCCGGCGGACG							
hu.34-B	1036	TCGGAGTACCAGCTCCCGTACGTCTCGGCTCGGCGCATCAAGGATGCCTCCCGCCGTTCCACAGACAGC							
hu.47-B	1036	TCGGAGTACCAGCTCCCGTACGTCTCGGCTCGGCGCATCAAGGATGCCTCCCGCCGTTCCACAGACAGC							
hu.29-B	1036	TCGGAGTACCAGCTCCCGTACGTCTCGGCTCGGCGCATCAAGGATGCCTCCCGCCGTTCCACAGACAGC							
hu.63-B	1036	TCGGAGTACCAGCTCCCGTACGTCTCGGCTCGGCGCATCAAGGATGCCTCCCGCCGTTCCACAGACAGC							

FIG. 3AP

hu. 56-B 1036 TTGGAGTACCAGCTCCCGTACGTCTCGGCTCGGCGCATCAAGGATGCCTCCCGCCGTTCCAGCAGACG
 hu. 45-B 1036 TCGGGTACCAGTCCCGTACGTCTCGGCTCGGCGCATCAAGGATGCCTCCCGCCGTTCCAGCAGACG
 hu. 57-B 1033 TTGGAGTACCAGTCCCGTACGTCTCGGCTCGGCGCATCAAGGATGCCTCCCGCCGTTCCAGCAGACG
 hu. 35-B 1036 TCGGAGTACCAGTCCCGTACGTCTCGGCTCGGCGCATCAAGGATGCCTCCCGCCGTTCCAGCAGACG
 hu. 58-B 1036 TCGGAGTACCAGTCCCGTACGTCTCGGCTCGGCGCATCAAGGATGCCTCCCGCCGTTCCAGCAGACG
 hu. 28-B 1036 TCGGAGTACCAGTCCCGTACGTCTCGGCTCGGCGCATCAAGGATGCCTCCCGCCGTTCCAGCAGACG
 hu. 51-B 1036 TCGGAGTACCAGTCCCGTACGTCTCGGCTCGGCGCATCAAGGATGCCTCCCGCCGTTCCAGCAGACG
 hu. 19-B 1036 TCGGAGTACCAGTCCCGTACGTCTCGGCTCGGCGCATCAAGGATGCCTCCCGCCGTTCCAGCAGACG
 hu. 49-B 1036 TCGGAGTACCAGTCCCGTACGTCTCGGCTCGGCGCATCAAGGATGCCTCCCGCCGTTCCAGCAGACG
 hu. 52-B 1036 TCGGAGTACCAGTCCCGTACGTCTCGGCTCGGCGCATCAAGGATGCCTCCCGCCGTTCCAGCAGACG
 hu. 13-B 1036 TCGGAGTACCAGTCCCGTACGTCTCGGCTCGGCGCATCAAGGATGCCTCCCGCCGTTCCAGCAGACG
 AAV2-B 1036 TCGGAGTACCAGTCCCGTACGTCTCGGCTCGGCGCATCAAGGATGCCTCCCGCCGTTCCAGCAGACG
 hu. 20-B 1036 TCGGAGTACCAGTCCCGTACGTCTCGGCTCGGCGCATCAAGGATGCCTCCCGCCGTTCCAGCAGACG
 hu. 24-B 1036 TCGGAGTACCAGTCCCGTACGTCTCGGCTCGGCGCATCAAGGATGCCTCCCGCCGTTCCAGCAGACG
 hu. 64-B 1036 TCGGAGTACCAGTCCCGTACGTCTCGGCTCGGCGCATCAAGGATGCCTCCCGCCGTTCCAGCAGACG
 hu. 27-B 1036 TCGGGTACCAGTCCCGTACGTCTCGGCTCGGCGCATCAAGGATGCCTCCCGCCGTTCCAGCAGACG
 hu. 21-B 1036 TCGGAGTACCAGTCCCGTACGTCTCGGCTCGGCGCATCAAGGATGCCTCCCGCCGTTCCAGCAGACG
 hu. 22-B 1036 TCGGAGTACCAGTCCCGTACGTCTCGGCTCGGCGCATCAAGGATGCCTCCCGCCGTTCCAGCAGACG
 hu. 23-B 1036 TCGGAGTACCAGTCCCGTACGTCTCGGCTCGGCGCATCAAGGATGCCTCCCGCCGTTCCAGCAGACG
 hu. 7-C 1036 TCGGAGTACCAGTCCCGTACGTCTCGGCTCGGCGCATCAAGGATGCCTCCCGCCGTTCCAGCAGACG
 hu. 61-C 1036 TCGGAGTACCAGTCCCGTACGTCTCGGCTCGGCGCATCAAGGATGCCTCCCGCCGTTCCAGCAGACG
 rh. 56-C 1036 TCGGAGTACCAGTCCCGTACGTCTCGGCTCGGCGCATCAAGGATGCCTCCCGCCGTTCCAGCAGACG
 hu. 9-C 1036 TCGGAGTACCAGTCCCGTACGTCTCGGCTCGGCGCATCAAGGATGCCTCCCGCCGTTCCAGCAGACG
 hu. 54-C 1036 TCGGAGTACCAGTCCCGTACGTCTCGGCTCGGCGCATCAAGGATGCCTCCCGCCGTTCCAGCAGACG
 hu. 53-C 1036 TCGGAGTACCAGTCCCGTACGTCTCGGCTCGGCGCATCAAGGATGCCTCCCGCCGTTCCAGCAGACG
 hu. 60-C 1036 TCGGAGTACCAGTCCCGTACGTCTCGGCTCGGCGCATCAAGGATGCCTCCCGCCGTTCCAGCAGACG
 hu. 55-C 1036 TCGGAGTACCAGTCCCGTACGTCTCGGCTCGGCGCATCAAGGATGCCTCCCGCCGTTCCAGCAGACG
 hu. 2-C 1036 TCGGAGTACCAGTCCCGTACGTCTCGGCTCGGCGCATCAAGGATGCCTCCCGCCGTTCCAGCAGACG
 hu. 1-C 1036 TCGGAGTACCAGTCCCGTACGTCTCGGCTCGGCGCATCAAGGATGCCTCCCGCCGTTCCAGCAGACG
 hu. 18-C 1036 TCGGAGTACCAGTCCCGTACGTCTCGGCTCGGCGCATCAAGGATGCCTCCCGCCGTTCCAGCAGACG

FIG. 3AQ

hu. 3-C 1039 TCGGAGTACCAGCTCCCGTACGTCCCGGGCTCGGGCGCATCAAGGATGCCTCCCGCCGTTTCCAGCGGACG
 hu. 25-C 1036 TCGGAGTACCAGCTCCCGTACGTCTGGCTCGGCGCATCAAGGATGCCTCCCGCCGTTTCCAGCGGACG
 hu. 15-C 1036 TCGGGGTACCAGCTCCCGTACGTCTGGCTTGGCGCATCAAGGATGCCTCCCGCCGTTTCCAGCAGACG
 hu. 16-C 1036 TCGGAGTACCAGCTCCCGTACGTCTGGCTCGGCGCATCAAGGATGCCTCCCGCCGTTTCCAGCAGACG
 hu. 11-C 1036 TCGGAGTACCAGCTCCCGTACGTCTGGCTCGGCGCATCAAGGATGCCTCCCGCCGTTTCCAGCGGACG
 hu. 10-C 1036 TCGGAGTACCAGCTCCCGTACGTCTGGCTCGGCGCATCAAGGATGCCTCCCGCCGTTTCCAGCGGACG
 hu. 4-C 1036 TCGGAGTACCAGCTCCCGTACGTCTGGCTCGGCGCATCAAGGATGCCTCCCGCCGTTTCCAGCGGACG
 rh. 54-D 1042 TCGGAGTACCAGCTGCCGTACGTCTGGCTTGTCCACACAGGGCTGCCTCCGTTCCCGGGGACG
 rh. 48-D 1042 TCGGAATACCAGTGCCCTACGTCTGGCTCCGCACACAGGGCTGCCTCCGTTCCCGGGGACG
 rh. 55-D 1042 TCGGAATACCAGTGCCCTACGTCTGGCTCCGCACACAGGGCTGCCTCCGTTCCCGGGGACG
 rh. 62-D 1042 TCGGAATACCAGTGCCCTACGTCTGGCTCCGCACACAGGGCTGCCTCCGTTCCCGGGGACG
 AAV7-D 1042 TCGGAATACCAGTGCCGTACGTCTGGCTCTGCGCACACAGGGCTGCCTCCGTTCCCGGGGACG
 rh. 52-E 1045 TCGGAATACCAGTGCCGTACGTCTGGCTCTGCCCACACAGGGCTGCCTCCGTTCCCGGGGACG
 rh. 51-E 1045 TCGGAATACCAGTGCCGTACGTCTGGCTCTGCCCACACAGGGCTGCCTCCGTTCCCGGGGACG
 hu. 39-E 1045 TCGGAATACCAGCGCCGTACGTCTGGCTCTGCCCACACAGGGCTGCCTCCGTTCCCGGGGACG
 rh. 53-E 1045 TCGGAATACCAGTGCCGTACGTCTGGCTCTGCCCACACAGGGCTGCCTCCGTTCCCGGGGACG
 hu. 37-E 1045 TCGGAATACCAGTGCCGTACGTCTGGCTCTGCCCACACAGGGCTGCCTCCGTTCCCGGGGACG
 rh. 43-E 1042 TCGGAGTACCAGTGCCGTACGTCTGGCTCTGCCCACACAGGGCTGCCTCCGTTCCCGGGGACG
 rh. 50-E 1045 TCGGAATACCAGTGCCGTACGTCTGGCTCTGCCCACACAGGGCTGCCTCCGTTCCCGGGGACG
 rh. 49-E 1045 TCGGAGTACCAGTGCCGTACGTCTGGCTCTGCCCACACAGGGCTGCCTCCGTTCCCGGGGACG
 rh. 61-E 1045 TCGGAATACCAGTGCCGTACGTCTGGCTCTGCCCACACAGGGCTGCCTCCGTTCCCGGGGACG
 hu. 41-E 1045 TCGGAATACCAGTGCCGTACGTCTGGCTCTGCCCACACAGGGCTGCCTCCGTTCCCGGGGACG
 rh. 64-E 1045 TCGGAATACCAGTGCCGTACGTCTGGCTCTGCCCACACAGGGCTGCCTCCGTTCCCGGGGACG
 hu. 42-E 1045 TCGGAATACCAGTGCCGTACGTCTGGCTCTGCCCACACAGGGCTGCCTCCGTTCCCGGGGACG
 rh. 57-E 1045 TCGGAATACCAGTGCCGTACGTCTGGCTCTGCCCACACAGGGCTGCCTCCGTTCCCGGGGACG
 hu. 40-E 1045 TCGGAATACCAGTGCCGTACGTCTGGCTCTGCCCACACAGGGCTGCCTCCGTTCCCGGGGACG
 AAV8-E 1045 TCGGAGTACCAGTGCCGTACGTCTGGCTCTGCCCACACAGGGCTGCCTCCGTTCCCGGGGACG
 rh. 58-E 1045 TCGGAATACCAGTGCCGTACGTCTGGCTCTGCCCACACAGGGCTGCCTCCGTTCCCGGGGACG
 rh. 40-E 1045 TCGGAATACCAGTGCCGTACGTCTGGCTCTGCCCACACAGGGCTGCCTCCGTTCCCGGGGACG
 hu. 67-E 1045 TCGGAATACCAGTGCCGTACGTCTGGCTCTGCCCACACAGGGCTGCCTCCGTTCCCGGGGACG

FIG. 3AR

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hu.17-E	1045	TCGGAATACAGTCCCCTACGTCTCGGCTCTGCGCACACAGGGCTGCCCGCCTCCGTTCCCCGGCGGACG	1130	1140	1150	1160	1170	1180	1190
hu.6-E	1045	TCGGAATACAGTCCCCTACGTCTCGGCTCTGCGCACACAGGGCTGCCCGCCTCCGTTCCCCGGCGGACG							
hu.66-E	1045	TCGGAATACAGTCCCCTACGTCTCGGCTCCGCGCACACAGGGCTGCCCTCCGTTCCCCGGCGGACG							
rh.38-E	1045	TCGGAATACAGTCCCCTACGTCTCGGCTCCGCGCACACAGGGCTGCCCTCCGTTCCCCGGCGGACG							
hu.32-F	1042	TCAGACTATCAGTCCCCTACGTCTCGGCTCGGCTACGAGGGCTGCCCTCCCGCCGTTCCCAAGCGGACG							
AAV9/hu	1042	TCAGACTATCAGTCCCCTACGTCTCGGCTCGGCTACGAGGGCTGCCCTCCCGCCGTTCCCAAGCGGACG							
hu.31-F	1042	TCAGACTATCAGTCCCCTACGTCTCGGCTCGGCTACGAGGGCTGCCCTCCCGCCGTTCCCAAGCGGACG							
AAV5	1079	TCATTACGCTGCCGACGTACGGTTACGCGACGCTGAACCCGCGAC--AACACAGAAATCCCAACCGAGAG	1130	1140	1150	1160	1170	1180	1190
AAV3-3	1106	TCATTCATGCTCCCTCAGTATGGATACCTCACCTGAACAACGGA-----AGTCAAGCGGTGGGACG							
AAV4-4	1079	TCATTCATGCTCCCGACGTACGGCTACTGTGGACTGTGACCGCGCAACACTTCGCAGCAACAGACTGACAG							
AAV1-A	1109	TGTTTCATGATTCCGCAATACGGCTACCTGACGCTCAACAATGGC-----AGCCAAGCCGTGGGACG							
hu.46-A	1109	TGTTTCATGATTCCGCAATACGGCTACCTGACGCTCAACAATGGC-----AGCCAAGCCGTGGGACG							
hu.48-A	1109	TGTTTCATGATTCCGCAATACGGCTACCTGACGCTCAACAATGGC-----AGCCAAGCCGTGGGACG							
hu.44-A	1109	TGTTTCATGATTCCGCAATACGGCTACCTGACGCTCAACAATGGC-----AGCCAAGCCGTGGGACG							
hu.43-A	1112	TGTTTCATGATTCCGCAATACGGCTACCTGACGCTCAACAATGGC-----AGCCAAGCCGTGGGACG							
AAV6-A	1109	TGTTTCATGATTCCGCGACGTACGGCTACCTAACGCTCAACAATGGC-----AGCCAGGCAGTGGGACG							
hu.34-B	1106	TCATTCATGGTGCCACAGTATGGATACCTCACCCCTGAACAACGAG-----AGTCAGGCAGTAGGACG							
hu.47-B	1106	TCATTCATGGTGCCACAGTATGGATACCTCACCCCTGAACAACGAG-----AGTCAGGCAGTAGGACG							
hu.29-B	1106	TCATTCATGGTGCCACAGTATGGATACCTCACCCCTGAACAACGAG-----AGTCAGGCAGTAGGACG							
hu.63-B	1106	TCATTCATGGTGCCACAGTATGGATACCTCACCCCTGAACAACGAG-----AGTCAGGCAGTAGGACG							
hu.56-B	1106	TCATTCATGGTGCCACAGTATGGATACCTCACCCCTGAACAACGAG-----AGTCAGGCAGTAGGACG							
hu.45-B	1106	TCATTCATGGTGCCACAGTATGGATACCTCACCCCTGAACAACGAG-----AGTCAGGCAGTAGGACG							
hu.57-B	1103	TCATTCATGGTGCCACAGTATGGATACCTCACCCCTGAACAACGAG-----AGTCAGGCAGTAGGACG							
hu.35-B	1106	TCATTCATGGTACCAACAGTATGGATACCTCACCCCTGAACAACGAG-----AGTCAGGCAGTAGGACG							
hu.58-B	1106	TCATTCATGGTACCAACAGTATGGATACCTCACCCCTGAACAACGAG-----AGTCAGGCAGTAGGACG							
hu.28-B	1106	TCATTCATGGTACCAACAGTATGGATACCTCACCCCTGAACAACGAG-----AGTCAGGCAGTAGGACG							
hu.51-B	1106	TCATTCATGGTACCAACAGTATGGATACCTCACCCCTGAACAACGAG-----AGTCAGGCAGTAGGACG							

FIG. 3A5

hu.19-B	1106	TCTTCATGGTGCCACAGTATGGATACCTCACCCCTGAACAACGGC-----AGTCAGGCGGTAGGACG
hu.49-B	1106	TCTTCATGGTGCCACAGTATGGATACCTCACCCCTGAACAACGGG-----AGTCAGGCGGTAGGACG
hu.52-B	1106	TCTTCATGGTGCCACAGTATGGATACCTCACCCCTGAGCAACGGG-----AGTCAGGCGGTAGGACG
hu.13-B	1106	TCTTCATGGTGCCACAGTATGGATACCTCACCCCTGAACAACGGG-----AGTCAGGCGGTAGGACG
AAV2-B	1106	TCTTCATGGTGCCACAGTATGGATACCTCACCCCTGAACAACGGG-----AGTCAGGCGGTAGGACG
hu.20-B	1106	TCTTCATGGTGCCACAGTATGGATACCTCACCCCTGAACAACGGC-----AGTCAGGCGGTAGGACG
hu.24-B	1106	TCTTCATGGTGCCACAGTATGGATACCTCACCCCTGAACAACGGC-----AGTCAGGCGGTAGGACG
hu.64-B	1106	TCTTCATGGTGCCACAGTATGGATACCTCACCCCTGAACAACGGG-----AGTCAGGCGGTAGGACG
hu.27-B	1106	TCTTCATGGTGCCACAGTATGGATACCTCACCCCTGAACAACGGC-----AGTCAGGCGGTAGGACG
hu.21-B	1106	TCTTCATGGTGCCACAGTATGGATACCTCACCCCTGAACAACGGC-----AGTCAGGCGGTAGGACG
hu.22-B	1106	TCTTCATGGTGCCACAGTATGGATACCTCACCCCTGAACAACGGC-----AGTCAGGCGGTAGGACG
hu.23-B	1106	TCTTCATGGTGCCACAGTATGGATACCTCACCCCTGAACAACGGC-----AGTCAGGCGGTAGGACG
hu.7-C	1106	TCTTCATGGTGCCACAGTATGGATACCTCACCCCTGAACAACGGG-----AGTCAGGCGGTAGGACG
hu.61-C	1106	TCTTCATGGTGCCACAGTATGGATACCTCACCCCTGAACAACGGG-----AGTCAGGCGGTAGGACG
rh.56-C	1106	TCTTCATGGTGCCACAGTATGGATACCTCACCCCTGAACAACGGG-----AGTCAGGCGGTAGGACG
hu.9-C	1106	TCTTCATGGTGCCACAGTATGGATACCTCACCCCTGAACAACGGG-----AGTCAGGCGGTAGGACG
hu.54-C	1106	TCTTCATGGTGCCACAGTATGGATACCTCACCCCTGAACAACGGG-----AGTCAGGCGGTAGGACG
hu.53-C	1106	TCTTCATGGTGCCACAGTATGGATACCTCACCCCTGAACAACGGG-----AGTCAGGCGGTAGGACG
hu.60-C	1106	TCTTCATGGTGCCACAGTATGGATACCTCACCCCTGAACAACGGG-----AGTCAGGCGGTAGGACG
hu.55-C	1106	TCTTCATGGTGCCACAGTATGGATACCTCACCCCTGAACAACGGG-----AGTCAGGCGGTAGGACG
hu.2-C	1106	TCTTCATGGTGCCACAGTATGGATACCTCACCCCTGAACAACGGG-----AGTCAGGCGGTAGGACG
hu.1-C	1106	TCTTCATGGTGCCACAGTATGGATACCTCACCCCTGAACAACGGG-----AGTCAGGCGGTAGGACG
hu.18-C	1106	TCTTCATGGTGCCACAGTATGGATACCTCACCCCTGAACAACGGG-----AGTCAGGCGGTAGGACG
hu.3-C	1109	TCTTCATGGTGCCACAGTATGGATACCTCACCCCTGAACAACGGG-----AGTCAGGCGGTAGGACG
hu.25-C	1106	TCTTCATGGTGCCACAGTATGGATACCTCACCCCTGAACAACGGG-----AGTCAGGCGGTAGGACG
hu.15-C	1106	TCTTCATGGTGCCACAGTATGGATACCTCACCCCTGAACAACGGG-----AGTCAGGCGGTAGGACG
hu.16-C	1106	TCTTCATGGTGCCACAGTATGGATACCTCACCCCTGAACAACGGG-----AGTCAGGCGGTAGGACG
hu.11-C	1106	TCTTCATGGTGCCACAGTATGGATACCTCACCCCTGAACAACGGG-----AGTCAGGCGGTAGGACG
hu.10-C	1106	TCTTCAGGTGCCACAGTATGGATACCTCACCCCTGAACAACGGG-----AGTCAGGCGGTAGGACG
hu.4-C	1106	TCTTCATGGTGCCACAGTATGGATACCTCACCCCTGAACAACGGG-----AGTCAGGCGGTAGGACG

FIG. 3AT

rh. 54-D	1112	TCTTCATGATTCTCAGTACGGCTACCTGACTCTGAACAATGGC-----AGCCAATCGGTGGGACG
rh. 48-D	1112	TCTTCATGATTCCCCAGTACGGCTACCTGACTCTGAACAATGGC-----AGCCAATCGGTGGGTGCG
rh. 55-D	1112	TCTTCATGATTCCCCAGTACGGCTACCTGACTCTGAACAATGGC-----AGCCAATCGGTGGGTGCG
rh. 62-D	1112	TCTTCATGATTCCCCAGTACGGCTACCTGACTCTGAACAATGAC-----AGCCAATCGGTGGGTGCG
AAV7-D	1112	TCTTCATGATTCTCAGTACGGCTACCTGACTCTCAACAATGGC-----AGTCAGTCTGTGGGACG
rh. 52-E	1115	TCTTCATGATTCTCAGTACGGCTACCTGACTCCCAACAACGGT-----AGTCAGGCCGTGGGACG
rh. 51-E	1115	TCTTCATGATTCTCAGTACGGCTACCTGACTCTCAACAACGGT-----AGTCAGGCCGTGGGACG
hu. 39-E	1115	TCTTCATGATTCTCAGTACGGCTACCTGACTCTCAACAACGGT-----AGTCAGGCCGTGGGACG
rh. 53-E	1115	TCTTCATGATTCTCAGTACGGCTACCTGACTCTCAACAACGGT-----AGTCAGGCCGTGGGACG
hu. 37-E	1115	TCTTCATGATTCCCCAGTACGGCTACCTTACACTGAACAATGGA-----AGTCAAGCCGTAGGCCG
rh. 43-E	1112	TGTTTCATGATTCCCCAGTACGGCTACCTAACACTCAACAACGGT-----AGTCAGGCCGTGGGACG
rh. 50-E	1115	TCTTCATGATTCTCAGTACGGCTACCTGACTCTCAACAACGGT-----AGTCAGGCCGTGGGACG
rh. 49-E	1115	TCTTCATGATTCTCAGTACGGCAACCTGACTCTCAACAACGGT-----AGTCAGGCCGTGGGACG
rh. 61-E	1115	TCTTCATGATTCTCAGTACGGCTACCTGACTCTCAACAACGGT-----AGTCAGGCCGTGGGACG
hu. 41-E	1115	TCTTCATGATTCCCCAGTACGGCTACCTTACACTGAACAATGGA-----AGTCAAGCCGTAGGCCG
rh. 64-E	1115	TCTTCATGATTCTCAGTACGGCTACCTGACTCTCAACAACGGT-----AGTCAGGCCGTGGGACG
hu. 42-E	1115	TCTTCATGATTCCCCAGTACGGCTACCTTACACTGAACAATGGA-----AGTCAAGCCGTAGGCCG
rh. 57-E	1115	TCTTCATGATTCTCAGTACGGCTACCTGACTCTCAACAACGGT-----AGTCAGGCCGTGGGACG
hu. 40-E	1115	TCTTCATGATTCCCCAGTACGGCTACCTTACACTGAACAATGGA-----AGTCAAGCCGTAGGCCG
AAV8-E	1115	TGTTTCATGATTCCCCAGTACGGCTACCTAACACTCAACAACGGT-----AGTCAGGCCGTGGGACG
rh. 58-E	1115	TCTTCATGATTCTCAGTACGGCTACCTGACTCTCAACAACGGT-----AGTCAGGCCGTGGGACG
rh. 40-E	1115	TCTTCATGATTCCCCAGTACGGCTACCTTACACTGAACAATGGA-----AGTCAAGCCGTAGGCCG
hu. 67-E	1115	TCTTCATGATTCCCCAGTACGGCTACCTTACACTGAACAATGGA-----AGTCAAGCCGTAGGCCG
hu. 17-E	1115	TCTTCATGATTCTCAGTACGGGTACCTGACTCTGAACAACGGC-----AGTCAGGCCGTGGGCCG
hu. 6-E	1115	TCTTCATGATTCTCAGTACGGGTACCTGACTCTGAACAACGGC-----AGTCAGGCCGTGGGCCG
hu. 66-E	1115	TCTTCATGATTCCCCAGTACGGGTACCTTACACTGAACAATGGA-----AGTCAAGCCGTAGGCCG
rh. 38-E	1115	TCTTCATGATTCCCCAGTACGGGTACCTTACACTGAACAATGGA-----AGTCAAGCCGTAGGCCG
hu. 32-F	1112	TTTTTCATGATTCTCAGTACGGGTATCTGACGCTTAATGATGG-----AGCCAGGCCGTGGGTGCG
AAV9/hu	1112	TTTTTCATGATTCTCAGTACGGGTATCTGACGCTTAATGATGGA-----AGCCAGGCCGTGGGTGCG
hu. 31-F	1112	TTTTTCATGATTCTCAGTACGGGTATCTGACGCTTAATGATGGA-----GGCCAGGCCGTGGGTGCG

FIG. 3AU

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	1200	1210	1220	1230	1240	1250	1260
						
AAV5	1146	GAGCAGCTTCTTCTG	CCCTAGAGTACTTTCC	CAGCAAGATGCTGAG	AACGGGCAACAAC	TTGAGTTTACC	
AAV3-3	1167	CTCATCCCTTTTACT	GCCTGGAGTACTTCC	CTTGCAGATGCTAAG	GAAGTGGAAATAA	CACTTCCAATT	CAGC
AAV4-4	1149	AAATGCCCTTCTACT	GCCTGGAGTACTTCC	TTCCGAGATGCTGCG	GAAGTGGCAACA	CACTTTGAAAT	TACG
AAV1-A	1170	TTCATCCCTTTTACT	GCCTGGAATATTTCC	CTTCTCAGATGCTGAG	AACGGGCAACA	CACTTTACCTT	CAGC
hu.46-A	1170	TTCATCCCTTACT	GCCTGGAATATTTCC	CTTCTCAGATGCTGAG	AACGGGCAACA	CACTTTACCTT	CAGC
hu.48-A	1170	TTCATCCCTTTTACT	GCCTGGAATATTTCC	CTTCTCAGATGCTGAG	AACGGGCAACA	CACTTTACCTT	CAGC
hu.44-A	1170	TTCATCCCTTTTACT	GCCTGGAATATTTCC	CTTCTCAGATGCTGAG	AACGGGCAACA	CACTTTACCTT	CAGC
hu.43-A	1173	TTCATCCCTTTTACT	GCCTGGAATATTTCC	CTTCTCAGATGCTGAG	AACGGGCAACA	CACTTTACCTT	CAGC
AAV6-A	1170	GTCAATCCCTTTTACT	GCCTGGAATATTTCC	CATCGCAGATGCTGAG	AACGGGCAATA	AACTTTACCTT	CAGC
hu.34-B	1167	CTCTTCAATTTTACT	GCCTGGAGTACTTTC	CTTCTCAGATGCTGC	TACCGGAAACA	CACTTTACCTT	CAGC
hu.47-B	1167	CTCTTCAATTTTACT	GCCTGGAGTACTTTC	CTTCTCAGATGCTGC	TACCGGAAACA	CACTTTACCTT	CAGC
hu.29-B	1167	CTCTTCAATTTTACT	GCCTAGGTACTTTC	CTTCTCAGATGCTGC	TACCGGAAACA	CACTTTACCTT	CAGC
hu.63-B	1167	CTCTTCAATTTTACT	GCCTGGAGTACTTTC	CTTCTCAGATGCTGC	TACCGGAAACA	CACTTTACCTT	CAGC
hu.56-B	1167	CTCTTCCCTTTTACT	GCCTGGAGTACTTTC	CTTCTCAGATGCTGC	TACCGGAAACA	CACTTTACCTT	CAGC
hu.45-B	1167	CTCTTCAATTTTACT	GCCTGGAGTACTTTC	CTTCTCAGATGCTGC	TACCGGAAACA	CACTTTACCTT	CAGC
hu.57-B	1164	CTCTTCCCTTTTACT	GCCTGGAGTACTTTC	CTTCTCAGATGCTGC	TACCGGAAACA	CACTTTACCTT	CAGC
hu.35-B	1167	CTCTTCAATTTTACT	GCCTGGAGTACTTTC	CTTCTCAGATGCTGC	TACCGGAAACA	CACTTTACCTT	CAGC
hu.58-B	1167	CTCTTCAATTTTACT	GCCTGGAGTACTTTC	CTTCTCAGATGCTGC	TACCGGAAACA	CACTTTACCTT	CAGC
hu.28-B	1167	CTCTTCAATTTTACT	GCCTAGAGTACTTTC	CTTCTCAGATGCTGC	TACCGGAAACA	CACTTTACCTT	CAGC
hu.51-B	1167	CTCTTCAATTTTACT	GCCTGGAGTACTTTC	CTTCTCAGATGCTGC	TACCGGAAACA	CACTTTACCTT	CAGC
hu.19-B	1167	CTCTTCCCTTTTACT	GCCTGGAGTACTTTC	CTTCTCAGATGCTGC	TACCGGAAACA	CACTTTACCTT	CAGC
hu.49-B	1167	CTCTTCAATTTTACT	GCCTGGAGTACTTTC	CTTCTCAGATGCTGC	TACCGGAAACA	CACTTTACCTT	CAGC
hu.52-B	1167	CTCTTCAATTTTACT	GCCTGGAGTACTTTC	CTTCTCAGATGCTGC	TACCGGAAACA	CACTTTACCTT	CAGC
hu.13-B	1167	CTCTTCAATTTTACT	GCCTGGAGTACTTTC	CTTCTCAGATGCTGC	TACCGGAAACA	CACTTTACCTT	CAGC
AAV2-B	1167	CTCTTCAATTTTACT	GCCTGGAGTACTTTC	CTTCTCAGATGCTGC	TACCGGAAACA	CACTTTACCTT	CAGC
hu.20-B	1167	CTCTTCCCTTTTACT	GCCTGGAGTACTTTC	CTTCTCAGATGCTGC	TACCGGAAACA	CACTTTACCTT	CAGC
hu.24-B	1167	CTCTTCCCTTTTACT	GCCTGGAGTACTTTC	CTTCTCAGATGCTGC	TACCGGAAACA	CACTTTACCTT	CAGC

FIG. 3AV

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hu. 64-B	1167	CTCTTCA	TTTTACTG	CCTGGAGT	ACTTTCC	TTCTCAGAT	GCTGCGTAC	CGGAAACA	ACTTTAC	CTTTCAGC	
hu. 27-B	1167	CTCTTCC	TTTTACTG	CCTGGAGT	ACTTTCC	TTCTCAGAT	GCTTCTGTA	CCGAAACA	ACTTTAC	CTTTCAGC	
hu. 21-B	1167	CTCTTCC	TTTTACTG	CCTGGAGT	ACTTTCC	TTCTCAGAT	GCTTCTGTA	CCGAAACA	ACTTTAC	CTTTCAGC	
hu. 22-B	1167	CTCTTCC	TTTTACTG	CCTGGAGT	ACTTTCC	TTCTCAGAC	GCTTCTGTA	CCGAAACA	ACTTTAC	CTTTCAGC	
hu. 23-B	1167	CTCTTCC	TTTTACTG	CCTGGAGT	ATTTCC	TTCTCAGAT	GCTTCTGTA	CCGAAACA	ACTTTAC	CTTTCAGC	
hu. 7-C	1167	CTCTTCC	TTTTACTG	CCTGGAGT	ACTTTCC	TTCTCAGAT	GCTTCTGTA	CCGAAACA	ACTTTAC	CTTTCAGC	
hu. 61-C	1167	CTCTTCA	TTTTACTG	CCTGGAGT	ACTTTCC	TTCTCAGAT	GCTTCTGTA	CCGAAACA	ACTTTAC	CTTTCAGC	
rh. 56-C	1167	CTCTTCC	TTTTACTG	CCTGGAGT	ACTTTCC	TTCTCAGAT	GCTTCTGTA	CCGAAACA	ACTTTAC	CTTTCAGC	
hu. 9-C	1167	CTCTTCC	TTTTACTG	CCTGGAGT	ACTTTCC	TTCTCAGAT	GCTTCTGTA	CCGAAACA	ACTTTAC	CTTTCAGC	
hu. 54-C	1167	CTCTTCC	TTTTACTG	CCTGGAGT	ACTTTCC	TTCTCAGAT	GCTTCTGTA	CCGAAACA	ACTTTAC	CTTTCAGC	
hu. 53-C	1167	CTCTTCC	TTTTACTG	CCTGGAGT	ACTTTCC	TTCTCAGAT	GCTTCTGTA	CCGAAACA	ACTTTAC	CTTTCAGC	
hu. 60-C	1167	CTCTTCA	TTTTACTG	CCTGGAGT	ACTTTCC	TTCTCAGAT	GCTTCTGTA	CCGAAACA	ACTTTAC	CTTTCAGC	
hu. 55-C	1167	CTCTTCC	TTTTACTG	CCTGGAGT	GCTTTCC	TTCTCAGAT	GCTTCTGTA	CCGAAACA	ACTTTAC	CTTTCAGC	
hu. 2-C	1167	CTCTTCC	TTTTACTG	CCTGGAGT	ACTTTCC	TTCTCAGAT	GCTTCTGTA	CCGAAACA	ACTTTAC	CTTTCAGC	
hu. 1-C	1167	CTCTTCC	TTTTACTG	CCTGGAGT	ACTTTCC	TTCTCAGAT	GCTTCTGTA	CCGAAACA	ACTTTAC	CTTTCAGC	
hu. 18-C	1167	CTCTTCC	TTTTACTG	CCTGGAGT	ACTTTCC	TTCTCAGAT	GCTTCTGTA	CCGAAACA	ACTTTAC	CTTTCAGC	
hu. 3-C	1170	CTCTTCC	TTTTACTG	CCTGGAGT	ACTTTCC	TTCTCAGAT	GCTTCTGTA	CCGAAACA	ACTTTAC	CTTTCAGC	
hu. 25-C	1167	CTCTCCC	TTTTACTG	CCTGGAGT	ACTTTCC	TTCTCAGAT	GCTTCTGTA	CCGAAACA	ACTTTAC	CTTTCAGC	
hu. 15-C	1167	CTCTTCC	TTTTACTG	CCTGGAGT	ACTTTCC	TTCTCAGAT	GCTTCTGTA	CCGAAACA	ACTTTAC	CTTTCAGC	
hu. 16-C	1167	CTCTTCC	TTTTACTG	CCTGGAGT	ACTTTCC	TTCTCAGAT	GCTTCTGTA	CCGAAACA	ACTTTAC	CTTTCAGC	
hu. 11-C	1167	CTCTTCC	TTTTACTG	CCTGGAGT	ACTTTCC	TTCTCAGAT	GCTTCTGTA	CCGAAACA	ACTTTAC	CTTTCAGC	
hu. 10-C	1167	CTCTTCC	TTTTACTG	CCTGGAGT	ACTTTCC	TTCTCAGAT	GCTTCTGTA	CCGAAACA	ACTTTAC	CTTTCAGC	
hu. 4-C	1167	CTCTTCC	TTTTACTG	CCTGGAGT	ACTTTCC	TTCTCAGAT	GCTTCTGTA	CCGAAACA	ACTTTAC	CTTTCAGC	
rh. 54-D	1173	TTCA	TCTTACTG	CCTGGA	TACTTCC	TTCTCAGG	TGTA	CGGTA	CAAACTT	CACCTTCAGT	
rh. 48-D	1173	TTCC	TCTTCTACTG	CCTGGA	ATTTCC	TTCTCAA	ATGCTG	AGAAC	GGGCA	CAAACTT	CACCTTCAGC
rh. 55-D	1173	TTCC	TCTTCTACTG	CCTGGA	ATTTCC	TTCTCAA	ATGCTG	AGAAC	GGGCA	CAAACTT	CACCTTCAGC
rh. 62-D	1173	TTCC	TCTTCTACTG	CCTGGA	ATTTCC	TTCTCAA	ATGCTG	AGAAC	GGGCA	CAAACTT	CACCTTCAGC
AAV7-D	1173	TTCC	TCTTCTACTG	CCTGGA	ATTTCC	TTCTCAA	ATGCTG	AGAAC	GGGCA	CAAACTT	TGAGTTTCAGC
rh. 52-E	1176	TTCC	TCTTCTACTG	CCTGGA	ATTTCC	TTCTCAA	ATGCTG	AGAAC	GGGCA	CAAACTT	TTTCCTTCAGC
rh. 51-E	1176	TTCC	TCTTCTACTG	CCTGGA	ATTTCC	TTCTCAA	ATGCTG	AGAAC	GGGCA	CAAACTT	TTTCCTTCAGC

FIG. 3AW

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hu. 39-E	1176	TTCCCTCCTTCTACTGCCCTGGAGTACTTCCCTCTCAGATGCTGAGAACGGGCAACAACCTTTCCCTTCAGC	1270	1280	1290	1300	1310	1320	1330
rh. 53-E	1176	TTCCCTCCTTCTACTGCCCTGGAGTACTTCCCTCTCAGATGCTGAGAACGGGCAACAACCTTTCCCTTCAGC							
hu. 37-E	1176	TTCCCTCCTTCTACTGCCCTGGAGTACTTCCCTCTCAGATGCTGAGAACGGGCAACAACCTTTCCCTTCAGC							
rh. 43-E	1173	CTCCTCCTTCTACTGCCCTGGAGTACTTCCCTCTCGCAGATGCTGAGAACGGGCAACAACCTTCCAGTTACT							
rh. 50-E	1176	TTCCCTCCTTCTACTGCCCTGGAGTACTTCCCTCTCAGATGCTGAGAACGGGCAACAACCTTTCCCTTCAGC							
rh. 49-E	1176	TTCCCTCCTTCTACTGCCCTGGAGTACTTCCCTCTCAGATGCTGAGAACGGGCAACAACCTTTCCCTTCAGC							
rh. 61-E	1176	TTCCCTCCTTCTACTGCCCTGGAGTACTTCCCTCTCAGATGCTGAGAACGGGCAACAACCTTTCCCTTCAGC							
hu. 41-E	1176	TTCCCTCCTTCTACTGCCCTGGAGTACTTCCCTCTCAGATGCTGAGAACGGGCAACAACCTTTCCCTTCAGC							
rh. 64-E	1176	TTCCCTCCTTCTACTGCCCTGGAGTACTTCCCTCTCAGATGCTGAGAACGGGCAACAACCTTTCCCTTCAGC							
hu. 42-E	1176	TTCCCTCCTTCTACTGCCCTGGAGTACTTCCCTCTCAGATGCTGAGAACGGGCAACAACCTTTCCCTTCAGC							
rh. 57-E	1176	TTCCCTCCTTCTACTGCCCTGGAGTACTTCCCTCTCAGATGCTGAGAACGGGCAACAACCTTTCCCTTCAGC							
hu. 40-E	1176	TTCCCTCCTTCTACTGCCCTGGAGTACTTCCCTCTCAGATGCTGAGAACGGGCAACAACCTTTCCCTTCAGC							
AAV8-E	1176	CTCCTCCTTCTACTGCCCTGGAGTACTTCCCTCTCGCAGATGCTGAGAACGGGCAACAACCTTCCAGTTACT							
rh. 58-E	1176	TTCCCTCCTTCTACTGCCCTGGAGTACTTCCCTCTCAGATGCTGAGAACGGGCAACAACCTTTCCCTTCAGC							
rh. 40-E	1176	TTCCCTCCTTCTACTGCCCTGGAGTACTTCCCTCTCAGATGCTGAGAACGGGCAACAACCTTTCCCTTCAGC							
hu. 67-E	1176	TTCCCTCCTTCTACTGCCCTGGAGTACTTCCCTCTCAGATGCTGAGAACGGGCAACAACCTTTCCCTTCAGC							
hu. 17-E	1176	TTCCCTCCTTCTACTGCCCTGGAGTACTTCCCTCTCAGATGCTGAGAACGGGCAACAACCTTTCCCTTCAGC							
hu. 6-E	1176	TTCCCTCCTTCTACTGCCCTGGAGTACTTCCCTCTCAGATGCTGAGAACGGGCAACAACCTTTCCCTTCAGC							
hu. 66-E	1176	TTCCCTCCTTCTACTGCCCTGGAGTACTTCCCTCTCAGATGCTGAGAACGGGCAACAACCTTTCCCTTCAGC							
rh. 38-E	1176	TTCCCTCCTTCTACTGCCCTGGAGTACTTCCCTCTCAGATGCTGAGAACGGGCAACAACCTTTCCCTTCAGC							
hu. 32-F	1173	TTCCCTCCTTCTACTGCCCTGGAGTACTTCCCTCTCAGATGCTGAGAACGGGCAACAACCTTTCCCTTCAGC							
AAV9/hu	1173	TTCCCTCCTTCTACTGCCCTGGAGTACTTCCCTCTCAGATGCTGAGAACGGGCAACAACCTTTCCCTTCAGC							
hu. 31-F	1173	TTCCCTCCTTCTACTGCCCTGGAGTACTTCCCTCTCAGATGCTGAGAACGGGCAACAACCTTTCCCTTCAGC							
AAV5	1216	TACAACTTTGAGGAGGTGCCCTTCCACTCCAGCTTCGCTCCAGTCAGAACCTGTTCAAGCTGGCCAACC							
AAV3-3	1237	TATACCTTCGAGGATGTACCTTTTCACAGCAGCTACGCTCACAGCCAGAGTTTGGATCGCTTGATGAATC							
AAV4-4	1219	TACAGTTTGGAGGAGGTGCCCTTCCACTCGATGTACGCGCACAGCCAGAGCCTGGACCGGCTGATGAACC							
AAV1-A	1240	TACACCTTTGAGGAGGTGCCCTTCCACAGCAGCTACGCGCACAGCCAGAGCCTGGACCGGCTGATGAATC							

FIG. 3A

hu. 46-A 1240 TACACCTTTGAGGAAGTGCCTCTCCACAGCAGCTGCGCGCACAGCCACAGAGCCCTGGACCGGCTGATGAATC
 hu. 48-A 1240 TACACCTTTGAGGAAGTGCCTTTCCACAGCAGCTACGCGCACAGCCACAGAGCCCTGGACCGGCTGATGAATC
 hu. 44-A 1240 TACACCTTTGAGGAAGTGCCTTTCCACAGCAGCTACGCGCACAGCCACAGAGCCCTGGACCGGCTGATGAATC
 hu. 43-A 1243 TACACCTTTGAGGAAGTGCCTCTCCACAGCAGCTACGCGCACAGCCACAGAGCCCTGGACCGGCTGATGAATC
 AAV6-A 1240 TACACCTTCGAGGACGTGCCTTTCCACAGCAGCTACGCGCACAGCCACAGAGCCCTGGACCGGCTGATGAATC
 hu. 34-B 1237 TACACTTTTGAGGACGTTCCCTTTCCACAGCAGCTACGCTCACAGCCACAGAGTCTGGCCGTCTCATGAATC
 hu. 47-B 1237 TACACTTTTGAGGACGTTCCCTTTCCACAGCAGCTACGCTCACAGCCACAGAGTCTGGACCGTCTCATGAATC
 hu. 29-B 1237 TACACCTTTGAGGACGTTCCCTTTCCACAGCAGCTACGCTCACAGCCACAGAGTTTGGACCGTCTCATGAATC
 hu. 63-B 1237 TACACCTTTGAGGACGTTCCCTTTCCACAGCAGCTACGCTCACAGCCACAGAGTTTGGACCGTCTCATGAATC
 hu. 56-B 1237 TACACTTTTGAAGACGTTCCCTTTCCACAGCAGCTACGCTCACAGTCAAAGTCTGGACCGTCTCATGAATC
 hu. 45-B 1237 TACACTTTTGAGGACGTTCCCTTTCCACAGCAGCTACGCTCACAGCCACAGAGTCTGGACCGTCTCATGAATC
 hu. 57-B 1234 TACACTTTTGAAGACGTTCCCTTTCCACAGCAGCTACGCTCACAGTCAAAGTCTGGACCGTCTCATGAATC
 hu. 35-B 1237 TACACTTTTGAGGACGTTCCCTTTCCACAGCAGCTACGCTCACAGCCACAGAGTCTGGCCCGTCTCATGAATC
 hu. 58-B 1237 TACACCTTTGAGGATGTTCCCTTTCCACAGCAGCTACGCTCACAGCCACAGAGTTTGGACCGTCTCATGAATC
 hu. 28-B 1237 TACACCTTTGAGGACGTTCCCTTTCCACAGCAGCTACGCTCACAGCCACAGAGTTTGGACCGTCTCATGAATC
 hu. 51-B 1237 TACACTTTTGAGGACGTTCCCTTTCCACAGCGGCTACGCTCACAGCCACAGAGTCTGGACCGTCTCATGAATC
 hu. 19-B 1237 TACACCTTTGAAGACGTTCCCTTTCCATAGCAGCTACGCTCACAGCCAAAGTCTGGACCGTCTCATGAATC
 hu. 49-B 1237 TACACCTTTGAGGATGTTCCCTTTCCACAGCAGCTACGCTCACAGCCACAGAGTTTGGACCGTCTCATGAATC
 hu. 52-B 1237 TACACTTTTGAGGACGTTCCCTTTCCACAGCAGCTACGCTCACAGCCACAGAGTCTGGACCGTCTCATGAATC
 hu. 13-B 1237 TACACCTTTGAGGACGTTCCCTTTCCACAGCAGCTACGCTCACAGCCACAGAGTTTGGACCGTCTCATGAATC
 AAV2-B 1237 TACACTTTTGAGGACGTTCCCTTTCCACAGCAGCTACGCTCACAGCCACAGAGTCTGGACCGTCTCATGAATC
 hu. 20-B 1237 TACACCTTTGAAGACGTTCCCTTTCCATAGCAGCTACGCTCACAGCCAAAGTCTGGACCGTCTCATGAATC
 hu. 24-B 1237 TACACCTTTGAAGACGTTCCCTTTCCATAGCAGCTACGCTCACAGCCAAAGTCTGGACCGTCTCATGAATC
 hu. 64-B 1237 TACACCTTTGAGGACGTTCCCTTTCCACAGCAGCTACGCTCACAGCCACAGAGTTTGGACCGTCTCATGAATC
 hu. 27-B 1237 TACACCTTTGAAGACGTTCCCTTTCCATAGCAGCTACGCTCACGGCCAAAGTCTGGACCGTCTCATGAATC
 hu. 21-B 1237 TACACCTTTGAAGACGTTCCCTTTCCATAGCAGCTACGCTCACAGCCAAAGTCTGGACCGTCTCATGAATC
 hu. 22-B 1237 TACACCTTTGAAGACGTTCCCTTTCCATAGCAGCTACGCTCACAGCCAAAGTCTGGACCGTCTCATGAATC
 hu. 23-B 1237 TACACCTTTGAAGACGTTCCCTTTCCATAGCAGCTACGCTCACAGCCAAAGTCTGGACCGTCTCATGAATC
 hu. 7-C 1237 TACACCTTTGAAGACGTTCCCTTTCCACAGCAGCTACGCTCACAGCCACAGAGTCTGGATCGGCTGATGAATC
 hu. 61-C 1237 TACACTTTTGAAGACGTTGCCTTTCCACAGCAGCTACGCTCACAGCCACAGAGTCTGGATCGGCTGATGAATC

FIG. 3AY

rh. 56-C	1237	TACACCTTTGAAGACGTTCCCTTTCACAGCAGCTACGCTCACAGCCAGAGTCTGGATCGGCTGATGAATC
hu. 9-C	1237	TACACCTTTGAGGACGTTCCCTTTCACAGCAGCTACGCTCACAGCCAGAGTTTGGACCGGCTGATGAATC
hu. 54-C	1237	TACACTTTTGAAGACGTTGCCCTTTCACAGCAGCTACGCTCACAGCCAGGGTTTGGATCGGCTGATGAATC
hu. 53-C	1237	TACACTTTTGAAGACGTTGCCCTTTCACAGCAGCTACGCTCACAGCCAGAGTTTGGATCGGCTGATGAATC
hu. 60-C	1237	TACACTTTTGAAGACGTTGCCCTTTCACAGCAGCTACGCTCACAGCCAGAGTTTGGATCGGCTGATGAATC
hu. 55-C	1237	TACACTTTTGAAGACGTTGCCCTTTCACAGCAGCTACGCTCACAGCCAGAGTTTGGATCGGCTGATGAATC
hu. 2-C	1237	TACACTTTTGAAGACGTTGCCCTTTCACAGCAGCTACGCTCACAGCCAGAGTTTGGATCGGCTGATGAATC
hu. 1-C	1237	TACACTTTTGAAGACGTTGCCCTTTCACAGCAGCTACGCTCACAGCCAGAGTTTGGATCGGCTGATGAATC
hu. 18-C	1237	TACACCTTTGAAGACGTTCCCTTTCACAGCAGCTACGCTCACAGCCAGAGTTTGGATCGGCTGATGAATC
hu. 3-C	1240	TACACTTTTGAAGACGTTGCCCTTTCACAGCAGCTACGCTCACAGCCAGAGTTTGGATCGGCTGATGAATC
hu. 25-C	1237	TACACTTTTGAAGACGTTGCCCTTTCACAGCAGCTACGCTCACAGCCAGAGTTTGGATCGGCTGATGAATC
hu. 15-C	1237	TACACCTTTGAAGACGTTCCCTTTCACAGCAGCTACGCTCACAGCCAGAGTTTGGATCGGCTGATGAATC
hu. 16-C	1237	TACACCTTTGAAGACGTTCCCTTTCACAGCAGCTACGCTCACAGCCAGAGTTTGGATCGGCTGATGAATC
hu. 11-C	1237	TACACCTTTGAGGACGTTCCCTTTCACAGCAGCTACGCTCACAGCCAGAGTTTGGATCGGCTGATGAATC
hu. 10-C	1237	TACACCTTTGAGGACGTTCCCTTTCACAGCAGCTACGCTCACAGCCAGAGTTTGGATCGGCTGATGAATC
hu. 4-C	1237	TACACTTTTGAAGACGTTGCCCTTTCACAGCAGCTACGCTCACAGCCAGAGTTTGGATCGGCTGATGAATC
rh. 54-D	1243	TACACCTTCGAGGACGTTGCCCTTTCACAGCAGCTACGCTCACAGCCAGAGTTTGGATCGGCTGATGAATC
rh. 48-D	1243	TACACCTTCGAGGACGTTCCCTTTCACAGCAGCTACGCTCACAGCCAGAGTTTGGATCGGCTGATGAATC
rh. 55-D	1243	TACACCTTCGAGGACGTTCCCTTTCACAGCAGCTACGCTCACAGCCAGAGTTTGGATCGGCTGATGAATC
rh. 62-D	1243	TACACCTTCGAGGACGTTCCCTTTCACAGCAGCTACGCTCACAGCCAGAGTTTGGATCGGCTGATGAATC
AAV7-D	1243	TACAGCTTCGAGGACGTTGCCCTTTCACAGCAGCTACGCTCACAGCCAGAGTTTGGATCGGCTGATGAATC
rh. 52-E	1246	TACACTTTTCGAGGACGTTGCCCTTTCACAGCAGCTACGCTCACAGCCAGAGTTTGGATCGGCTGATGAATC
rh. 51-E	1246	TACACTTTTCGAGGACGTTGCCCTTTCACAGCAGCTACGCTCACAGCCAGAGTTTGGATCGGCTGATGAATC
hu. 39-E	1246	TACACTTTTCGAGGACGTTGCCCTTTCACAGCAGCTACGCTCACAGCCAGAGTTTGGATCGGCTGATGAATC
rh. 53-E	1246	TACACTTTTCGAGGACGTTGCCCTTTCACAGCAGCTACGCTCACAGCCAGAGTTTGGATCGGCTGATGAATC
hu. 37-E	1246	TACACTTTTCGAGGACGTTGCCCTTTCACAGCAGCTACGCTCACAGCCAGAGTTTGGATCGGCTGATGAATC
rh. 43-E	1243	TACACCTTCGAGGACGTTGCCCTTTCACAGCAGCTACGCTCACAGCCAGAGTTTGGATCGGCTGATGAATC
rh. 50-E	1246	TACACTTTTCGAGGACGTTGCCCTTTCACAGCAGCTACGCTCACAGCCAGAGTTTGGATCGGCTGATGAATC
rh. 49-E	1246	TACACTTTTCGAGGACGTTGCCCTTTCACAGCAGCTACGCTCACAGCCAGAGTTTGGATCGGCTGATGAATC
rh. 61-E	1246	TACCCCTTTCGAGGACGTTGCCCTTTCACAGCAGCTACGCTCACAGCCAGAGTTTGGATCGGCTGATGAATC

FIG. 3A2

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hu. 41-E	1246	TACACCTTCGAGGACGTGCCTTTCCACAGCAGCTACGCCACACAGCCAGAGCTTGACCGACTGATGAATC	1340	1350	1360	1370	1380	1390	1400
rh. 64-E	1246	TACACCTTCGAGGACGTGCCTTTCCACAGCAGCTACGCCACACAGCCAGAGTTTGGACAGGCTGATGAATC							
hu. 42-E	1246	TACACCTTCGAGGACGTGCCTTTCCACAGCAGCTACGCCACACAGCCAGAGCTTGACCGACTGATGAATC							
rh. 57-E	1246	TACACCTTCGAGGACGTGCCTTTCCACAGCAGCTACGCCACACAGCCAGAGTTTGGACAGGCTGATGAATC							
hu. 40-E	1246	TACACCTTCGAGGACGTGCCTTTCCACAGCAGCTACGCCACACAGCCAGAGCTTGACCGACTGATGAATC							
AAV8-E	1246	TACACCTTCGAGGACGTGCCTTTCCACAGCAGCTACGCCACACAGCCAGAGCTTGACCGGCTGATGAATC							
rh. 58-E	1246	TACACCTTCGAGGACGTGCCTTTCCACAGCAGCTACGCCACACAGCCAGAGTTTGGACAGGCTGATGAATC							
rh. 40-E	1246	TACACCTTCGAGGACGTGCCTTTCCACAGCAGCTACGCCACACAGCCAGAGCTTGACCGACTGATGAATC							
hu. 67-E	1246	TACACCTTCGAGGACGTGCCTTTCCACAGCGGCTACGCCACACAGCCAGAGCTTGACCGACTGATGAATC							
hu. 17-E	1246	TACCAGTTTGAGGACGTGCCTTTTCACAGCAGCTACGCCATAGCCAAAGCCTGGACCGGCTGATGAACC							
hu. 6-E	1246	TACCAGTTTGAGGACGTGCCTTTTCACAGCAGCTACGCCATAGCCAAAGCCTGGACCGGCTGATGAACC							
hu. 66-E	1246	TACACCTTCGAGGACGTGCCTTTCCACAGCAGCTGCGCACACAGCCAGAGCTCGGACCGACTGATGAATC							
rh. 38-E	1246	TACACCTTCGAGGACGTGCCTTTCCACAGCAGCTACGCCACACAGCCAGAGCTTGACCGACTGATGAATC							
hu. 32-F	1243	TACGAGTTTGAGAACGTACCTTTCCATAGCAGCTACGCTACAGCCAAAGCCTTGACCGACTAATGAATC							
AAV9/hu	1243	TACGAGTTTGAGAACGTACCTTTCCATAGCAGCTACGCTACAGCCAAAGCCTTGACCGACTAATGAATC							
hu. 31-F	1243	TACGAGTTTGAGAACGTACCTTTCCATAGCAGCTACGCTACAGCCAAAGCCTTGACCGACTAATGAATC							
								
AAV5	1286	CGCTGGTGACCACTACTGTACCGCTTCGTGAGCACAAAT----- ----- ----- -----							
AAV3-3	1307	CTCTTATTGATCAGTATCTGTACTACCTGAACAGAACGCAAGGAACAACCTCTGGAACAACCAACCAATC							
AAV4-4	1289	CTCTCATCGACCACTACCTGTGGGACTGCAATCGACCCACCACCGGAACCAACCTGAATGCCGGGACTGC							
AAV1-A	1310	CTCTCATCGACCAATACTGTATTACCTGAACAGAACTCAA-- --- AATCAGTCCGGAAGTGCCCAAAACAA							
hu. 46-A	1310	CTCTCATCGACCAATACTGTATTACCTGAACAGAACTCAA-- --- AATCAGTCCGGAAGTGCCCAAAACAG							
hu. 48-A	1310	CTCTCATCGACCAATACTGTATTACCTGAACAGAACTCAA-- --- AATCAGTCCGGAAGTGCCCAAAACAA							
hu. 44-A	1310	CTCTCATCGACCAATACTGTATTACCTGAACAGAACTCAA-- --- AATCAGTCCGGAAGTGCCCAAAACAA							
hu. 43-A	1313	CTCTCATCGTCCAATACTGTATTACCTGAACAGAACTCAA-- --- AATCAGTCCGGAAGTGCCCAAAACAA							
AAV6-A	1310	CTCTCATCGACCACTACCTGTATTACCTGAACAGAACTCAG-- --- AATCAGTCCGGAAGTGCCCAAAACAA							
hu. 34-B	1307	CTCTCATCGACCACTACCTGTATTACCTGAACAGAACTCAA-- --- ACTCCAAGTGAACCAACCAACGAGTC							
hu. 47-B	1307	CTCTCATCGACCACTACCTGTATTACCTGAACAGAACTCAA-- --- ACTCCAAGTGAACCAACCAACGAGTC							

FIG. 3BA

hu. 29-B 1307 CTCTCATCGACCGAGTACCTGTATTACTTGAGCAGAAACAAAC---ACTCCAAGCGGAAACCAACCGCAGTCTC
 hu. 63-B 1307 CTCTCATCGACCGAGTACCTGTATTACTTGAGCAGAAACAAAC---ACTCCAAGCGGAAACCAACCGCAGTCTC
 hu. 56-B 1307 CTCTCATCGACCGAGTACCTGTATTACTTGAGCAGAAACAAAC---ACTCCAAGCGGAAACCAACCGCAGTCTC
 hu. 45-B 1307 CTCTCATCGACCGAGTACCTGTATTACTTGAGCAGAAACAAAC---ACTCCAAGCGGAAACCAACCGCAGTCTC
 hu. 57-B 1304 CTCTCATCGACCGAGTACCTGTATTACTTGAGCAGAAACAAAC---ACTCCAAGCGGAAACCAACCGCAGTCTC
 hu. 35-B 1307 CTCTCATCGACCGAGTACCTGTATTACTTGAGCAGAAACAAAC---ACTCCAAGCGGAAACCAACCGCAGTCTC
 hu. 58-B 1307 CTCTCATCGACCGAGTACCTGTATTACTTGAGCAGAAACAAAC---ACTCCAAGCGGAAACCAACCGCAGTCTC
 hu. 28-B 1307 CTCTCATCGACCGAGTACCTGTATTACTTGAGCAGAAACAAAC---ACTCCAAGCGGAAACCAACCGCAGTCTC
 hu. 51-B 1307 CTCTCATCGACCGAGTACCTGTATTACTTGAGCAGAAACAAAC---ACTCCAAGCGGAAACCAACCGCAGTCTC
 hu. 19-B 1307 CTCTCATCGACCGAGTACCTGTATTACTTGAGCAGAAACAAAC---ACTCCAAGCGGAAACCAACCGCAGTCTC
 hu. 49-B 1307 CTCTCATCGACCGAGTACCTGTATTACTTGAGCAGAAACAAAC---ACTCCAAGCGGAAACCAACCGCAGTCTC
 hu. 52-B 1307 CTCTCATCGACCGAGTACCTGTATTACTTGAGCAGAAACAAAC---ACTCCAAGCGGAAACCAACCGCAGTCTC
 hu. 13-B 1307 CTCTCATCGACCGAGTACCTGTATTACTTGAGCAGAAACAAAC---ACTCCAAGCGGAAACCAACCGCAGTCTC
 AAV2-B 1307 CTCTCATCGACCGAGTACCTGTATTACTTGAGCAGAAACAAAC---ACTCCAAGCGGAAACCAACCGCAGTCTC
 hu. 20-B 1307 CTCTCATCGACCGAGTACCTGTATTACTTGAGCAGAAACAAAC---ACTCCAAGCGGAAACCAACCGCAGTCTC
 hu. 24-B 1307 CTCTCATCGACCGAGTACCTGTATTACTTGAGCAGAAACAAAC---ACTCCAAGCGGAAACCAACCGCAGTCTC
 hu. 64-B 1307 CTCTCGTCGACCGAGTACCTGTATTACTTGAGCAGAAACAAAC---ACTCCAAGCGGAAACCAACCGCAGTCTC
 hu. 27-B 1307 CTCTCATCGACCGAGTACCTGTATTACTTGAGCAGAAACAAAC---ACTCCAAGCGGAAACCAACCGCAGTCTC
 hu. 21-B 1307 CTCTCATCGACCGAGTACCTGTATTACTTGAGCAGAAACAAAC---ACTCCAAGCGGAAACCAACCGCAGTCTC
 hu. 22-B 1307 CTCTCATCGACCGAGTACCTGTATTACTTGAGCAGAAACAAAC---ACTCCAAGCGGAAACCAACCGCAGTCTC
 hu. 23-B 1307 CTCTCATCGACCGAGTACCTGTATTACTTGAGCAGAAACAAAC---ACTCCAAGCGGAAACCAACCGCAGTCTC
 hu. 7-C 1307 CTCTGATCGACCGAGTACCTGTATTATCTGAACAAACACACAA---TCAAATAGTGGAACTCTTCAGCAGTCTC
 hu. 61-C 1307 CTCTGATCGACCGAGTACCTGTATTATCTGAACAAAGACACAA---ACAAATAGTGGAACTCTTCAGCAGTCTC
 rh. 56-C 1307 CTCTGATCGACCGAGTACCTGTATTATCTGAACAAACACACAA---TCAAATAGTGGAGCTCTTCAGCAGTCTC
 hu. 9-C 1307 CTCTGATCGACCGAGTATCTATATCTGAACAGGACACAA---TCAAATAGTGGAACTCTTCAGCAGTCTC
 hu. 54-C 1307 CTCTGATCGACCGAGTACCTGTATTATCTAAACAGAACACAA---ACAGCTAGTGGAACT---CAGCAGTCTC
 hu. 53-C 1307 CTCTGATCGACCGAGTACCTGTATTATCTAAACAGAACACAA---ACAGCTAGTGGAACT---CAGCAGTCTC
 hu. 60-C 1307 CTCTGGTCGACCGAGTACCTGTATTATCTGAACAAAGACACAA---ACAAATAGTGGAACTCTTCAGCAGTCTC
 hu. 55-C 1307 CTCTGATCGACCGAGTACCTGTATTATCTAAACAGAACACAA---ACAGCTAGTGGAACT---CAGCAGTCTC
 hu. 2-C 1307 CTCTGATCGACCGAGTACCTGTATTATCTGAACAAAGACACAA---ACAAATAGTGGAACTCTTCAGCAGTCTC

FIG. 3BB

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hu.1-C 1307 CTCTGATCGACCGAGTACCTGTATTATCTGAACAAGACACAA---ACAAATAGTGGAACCTCTTCAGCAGTC
 hu.18-C 1307 CTCTGATCGACCGAGTACCTATATATCTGAACAAGACACAA---TCAAATAGTGGAACCTCTTCAGCAGTC
 hu.3-C 1310 CTCTGATCGACCGAGTACCTGTATTATCTGAACAAGACACAA---ACAAATAGTGGAACCTCTTCAGCAGTC
 hu.25-C 1307 CTCTGATCGACCGAGTACCTGTATTATCTGAACAAGACACAA---ACAAATAGTGGAACCTCTTCAGCAGTC
 hu.15-C 1307 CTCTGATCGACCGAGTACCTGTATTATCTGAACAAGACACAA---TCAAATAGTGGAACCTCTTCAGCAGTC
 hu.16-C 1307 CTCTGATCGACCGAGTACCTGTATTATCTGAACAAGACACAA---TCAAATAGTGGAACCTCTTCAGCAGTC
 hu.11-C 1307 CTCTGATCGACCGAGTACCTGTATTATCTGAACAAGACACAA---TCAAATAGTGGAACCTCTTCAGCAGTC
 hu.10-C 1307 CTCTGATCGACCGAGTACCTGTATTATCTGAACAAGACACAA---TCAAATAGTGGAACCTCTTCAGCAGTC
 hu.4-C 1307 CTCTGATCGACCGAGTACCTGTATTATCTGAACAAGACACAA---ACAAATAGTGGAACCTCTTCAGCAGTC
 rh.54-D 1313 CCTCATCGACCGAGTACCTGTATTACCTGGCTAGAACACAGAGTAACCCAGGAGGCACATCTGGCAATCG
 rh.48-D 1313 CTCTTATCGACCGAGTACCTGTATTACCTGGCCAGAACACAGAGCAACGCGAGGACACAGCTGGCAATCG
 rh.55-D 1313 CTCTTATCGACCGAGTACCTGTATTACCTGGCCAGAACACAGAGCAACGCGAGGACACAGCTGGCAATCG
 rh.62-D 1313 CTCTTATCGACCGAGTACCTGTATTACCTGGCCAGAACACAGAGTAACCCAGGAGGACACAGCTGGCAATCG
 AAV7-D 1313 CCTCATCGACCGAGTACCTGTACTACCTGGCCAGAACACAGAGTAACCCAGGAGGACACAGCTGGCAATCG
 rh.52-E 1316 CTCTCATCGACCGAGTACCTGTACTACCTGTCAAGAACCCAGTCT---ACGGAGGACACAGCGGGAACCCCA
 rh.51-E 1316 CTCTCATCGACCGAGTACCTGTACTACCTGTCAAGAACCCAGTCT---ACGGAGGACACAGCGGGAACCCCA
 hu.39-E 1316 CTCTCATCGACCGAGTACCTGTACTACCTGTCAAGAACCCAGTCT---ACGGAGGACACAGCGGGAACCCCA
 rh.53-E 1316 CTCTCATCGACCGAGTACCTGTACTACCTGTCAAGAACCCAGTCT---ACGGAGGACACAGCGGGAACCCCA
 hu.37-E 1316 CTCTCATCGACCGAGTACCTGTACTACCTGTATCCAGAACTCAGTCC---ACAGGAGGAACCTCAAGGTACCCCA
 rh.43-E 1313 CTCTGATTGACCGAGTACCTGTACTACCTGTCTCGGACTCAAACA---ACAGGAGGACACGCGGAAATACGCCA
 rh.50-E 1316 CTCTCGTCGACCGAGTACCTGTACTACCTGTCAAGAACCCAGTCT---ACGGAGGACACAGCGGGAACCCCA
 rh.49-E 1316 CTCTCATCGACCGAGTACCTGTACTACCTGTCAAGAACCCAGTCT---ACGGAGGACACAGCGGGAACCCCA
 rh.61-E 1316 CTCTCATCGACCGAGTACCTGTACTACCTGTCAAGAACCCAGTCT---ACGGAGGACACAGCGGGAACCCCA
 hu.41-E 1316 CTCTCATCGACCGAGTACCTGTACTACCTGTATCCAGAACTCAGTCC---ACAGGAGGAACCTCAAGGTACCCCA
 rh.64-E 1316 CTCTCATCGACCGAGTACCTGTACTACCTGTCAAGAACCCAGTCT---ACGGAGGACACAGCGGGAACCCCA
 hu.42-E 1316 CTCTCATCGACCGAGTACCTGTACTACCTGTATCCAGAACTCAGTCC---ACAGGAGGAACCTCAAGGTACCCCA
 rh.57-E 1316 CTCTCATCGACCGAGTACCTGTACTACCTGTCAAGAACCCAGTCT---ACGGAGGACACAGCGGGAACCCCA
 hu.40-E 1316 CTCTCATCGACCGAGTACCTGTACTACCTGTATCCAGAACTCAGTCC---ACAGGAGGAACCTCAAGGTACCCCA
 AAV8-E 1316 CTCTGATTGACCGAGTACCTGTACTACCTGTCTCGGACTCAAACA---ACAGGAGGACACGCGGAAATACGCCA
 rh.58-E 1316 CTCTCATCGACCGAGTACCTGTACTACCTGTCAAGAACCCAGTCT---ACGGAGGACACAGCGGGAACCCCA

FIG. 3BC

rh.40-E	1316	CTCTCATCGACCGAGTACCTGTACTACTTATCCAGAACTCAGTCC--ACAGGAGGAACTCAAGGTACCCA	1410	1420	1430	1440	1450	1460	1470
hu.67-E	1316	CTCTCATCGACCGAGTACCTGTACTACTTATCCAGAACTCAGTCC--ACAGGAGGAACTCAAGGTACCCA							
hu.17-E	1316	CCCTCATCGACCGAGTACCTGTACTACTACCTGTCTCGGACTCAGTCC--ACGGGAGGTACCGCAGGAACTCA							
hu.6-E	1316	CCCTCATCGACCGAGTACCTGTACTACTACCTGTCTCGGACTCAGTCC--ACGGGAGGTACCGCAGGAACTCA							
hu.66-E	1316	CTCTCATCGACCGAGTACCTGTACTACTTATCCAGAACTCGGTCC--ACAGGAGGAACTCAAGGTACCCA							
rh.38-E	1316	CTCTCATCGACCGAGTACCTGTACTACTTATCCAGAACTCAGTCC--ACAGGAGGAACTCAAGGTACCCA							
hu.32-F	1313	CACTCATCGACCAATACTTGTACTATCTCTCAAAGACTATTACGGTCTTGA-----CAGAATCAACA							
AAV9/hu	1313	CACTCATCGACCAATACTTGTACTATCTCTCAAAGACTATTACGGTCTTGA-----CAGAATCAACA							
hu.31-F	1313	CACTCATCGACCAATACTTGTACTATCTCTCAAAGACTATTACGGTCTTGA-----CAGAATCAACA							
AAV5	1335	CGGAGTCCAGTTCACACAGAACCTGGCCGGGAGATACGCCAACACCTACAAAAAAGTGGTCCCGGGGCC						
AAV3-3	1377	ACGGCTGCTTTTAGCCAGGCTGGCCCTCAGTCTATGTCTTTGCAGGCCAGAAATGGCTACCTGGGCC							
AAV4-4	1359	CACCACCAACTTTACCAAGCTGCGGCCCTACCAACTTTCCAACTTTAAAGAACTGGCTGCCCGGGCT							
AAV1-A	1377	GGACTTGCTGTTAGCCGTGGTCTCCAGCTGGCATGTCTGTTTCAGCCCAAAAAGTGGTACCTGGACCC							
hu.46-A	1377	GGACTTGCTGTTAGCCGTGGTCTCCAGCTGGCATGTCTGTTTCAGCCCAAAAAGTGGTACCTGGACCC							
hu.48-A	1377	GGACTTGCTGTTAGCCGTGGTCTCCAGCTGGCATGTCTGTTTCAGCCCAAAAAGTGGTACCTGGACCC							
hu.44-A	1377	GGACTTGCTGTTAGCCGTGGTCTCCAGCTGGCATGTCTGTTTCAGCCCAAAAAGTGGTACCTGGACCC							
hu.43-A	1380	GGACTTGCTGTTAGCCGTGGTCTCCAGCTGGCATGTCTGTTTCAGCCCAAAAAGTGGTACCTGGACCC							
AAV6-A	1377	GGACTTGCTGTTAGCCGTGGTCTCCAGCTGGCATGTCTGTTTCAGCCCAAAAAGTGGTACCTGGACCC							
hu.34-B	1374	AAGGCTTCAGTTTCTCAGGCCGGAGCGAGTGACATTCGGGACCAAGTCTAGGAACTGGCTTCTGGACCC							
hu.47-B	1374	AAGGCTCCAGTTTCTCAGGCCGGAGCGAGTGACATTCGGGACCAAGTCTAGGAACTGGCTTCTGGACCC							
hu.29-B	1374	CAGGCTTCAGTTTCTCAGGCCGGAGCGAGTGACATTCGGGACCAAGTCTAGGAACTGGCTTCTGGACCC							
hu.63-B	1374	AAGGCTTCAGTTTCTCAGGCCGGAGCGAGTGACATTCGGGACCAAGTCTAGGAACTGGCTTCTGGACCC							
hu.56-B	1374	CAGGCTTCAGTTTCTCAGGCCGGAGCGAGTGACATTCGGGACCAAGTCTAGGAACTGGCTTCTGGACCC							
hu.45-B	1374	AAGGCTTCAGTTTCTCAGGCCGGAGCGAGTGACATTCGGGACCAAGTCTAGGAACTGGCTTCTGGACCC							
hu.57-B	1371	CAGGCTTCAGTTTCTCAGGCCGGAGCGAGTGACATTCGGGACCAAGTCTAGGAACTGGCTTCTGGACCC							
hu.35-B	1374	AAGGCTTCAGTTTCTCAGGCCGGAGCGAGTGACATTCGGGACCAAGTCTAGGAACTGGCTTCTGGACCC							
hu.58-B	1374	CAGGCTTCAGTTTCTCAGGCCGGAGCGAGTGACATTCGGGATCAGTCTAGGAACTGGCTTCTCTGGACCC							

hu.28-B 1374 CAGGCTTCAGTTTCTCAGGCCGGAGCGAGTGACATTCAGGACCAGTCTAGGAACTGGCTTCCTGGACCC
 hu.51-B 1374 AAGGCTTCAGTTTCTCAGGCCGGAGCGAGTGACATTCGGGACCAGTCTAGGAACTGGCTTCCTGGACCC
 hu.19-B 1374 CAGGCTTCAGTTTCTCAGGCCGGAGCAAGTGACATTCGGGACCAGTCTAGAACTGGCTTCCTGGACCC
 hu.49-B 1374 CAGGCTTCAGTTTCTCAGGCCGGAGCAAGTGACATTCGGGACCAGTCTAGGAACTGGCTTCCTGGACCC
 hu.52-B 1374 AAGGCTTCAGTTTCTCAGGCCGGAGCGAGTGACATTCGGGACCAGTCTAGGAACTGGCTTCCTGGACCC
 hu.13-B 1374 CAGGCTTCAGTTTCTCAGGCCGGAGCAAGTGACATTCGGGACCAGTCTAGGAACTGGCTTCCTGGACCC
 AAV2-B 1374 AAGGCTTCAGTTTCTCAGGCCGGAGCGAGTGACATTCGGGACCAGTCTAGGAACTGGCTTCCTGGACCC
 hu.20-B 1374 CAGGCTTCAGTTTCTCAGGCCGGAGCAAGTGACATTCGGGACCAGTCTAGAACTGGCTTCCTGGACCC
 hu.24-B 1374 CAGGCTTCAGTTTCTCAGGCCGGAGCAAGTGACATTCGGGACCAGTCTAGAACTGGCTTCCTGGACCC
 hu.64-B 1374 AAGGCTTCAGTTTCTCAGGCCGGAGCAAGTGACATTCGGGACCAGTCTAGGAACTGGCTTCCTGGACCC
 hu.27-B 1374 CAGGCTTCAGTTTCTCAGGCCGGAGCAAGTGACGTTTCGGGACCAGTCTAGAACTGGCTTCCTGGACCC
 hu.21-B 1374 CAGGCTTCAGTTTCTCAGGCCGGAGCAAGTGACATTCGGGACCAGTCTAGAACTGGCTTCCTGGACCC
 hu.22-B 1374 CAGGCTTCAGTTTCTCAGGCCGGAGCAAGTGACATTCGGGACCAGTCTAGAACTGGCTTCCTGGACCC
 hu.23-B 1374 CAGGCTTCAGTTTCTCAGGCCGGAGCAAGTGACATTCGGGACCAGTCTAGAACTGGCTTCCTGGACCC
 hu.7-C 1374 TCGGCTACTGTTAGTCAAGCTGGACCCACCAGCATGTCTCTCAAGCTAAAACTGGCTACCTGGACCT
 hu.61-C 1374 TCGGCTACTGTTAGCCAAAGCTGGACCCACCACATGTCTCTTCAAGCTAAAAACCGCTGCCCTGGACCT
 rh.56-C 1374 TCGGCTACTGTTAGTCAAGCTGGACCCACCAGCATGTCTCTTCAAGCTAAAACTGGCTACCTGGACCT
 hu.9-C 1374 TAGGCTACTGTTAGCCAAAGCTGGACCCACCAGCATGTCTCTTCAAGCTAAAACTGGCTGCCCTGGACCT
 hu.54-C 1371 TCGGCTACTGTTAGCCAAAGCTGGACCCACCAGCATGTCTCTTCAAGCTAAAACTGGCTGCCCTGGACCG
 hu.53-C 1371 TCGGCTACTGTTAGCCAAAGCTGGACCCACCAGCATGTCTCTTCAAGCTAAAACTGGCTGCCCTGGACCG
 hu.60-C 1374 TCGGCTACTGTTAGCCAAAGCTGGACCCACCAGCATGTCTCTTCAAGCTAAAACTGGCTGCCCTGGACCT
 hu.55-C 1371 TCGGCTACTGTTAGCCAAAGCTGGACCCACCAGCATGTCTCTTCAAGCTAAAACTGGCTGCCCTGGACCG
 hu.2-C 1374 TCGGCTACTGTTAGCCAAAGCTGGACCCACCAGCATGTCTCTTCAAGCTAAAACTGGCTGCCCTGGACCT
 hu.1-C 1374 TCGGCTACTGTTAGCCAAAGCTGGACCCACCAGCATGTCTCTTCAAGCTAAAACTGGCTGCCCTGGACCT
 hu.18-C 1374 TCGGCTACTGTTAGCCAAAGCTGGACCCACCAGCATGTCTCTTCAAGCTAAAACTGGCTGCCCTGGACCT
 hu.3-C 1377 TCGGCTACTGTTAGCCAAAGCTGGACCCACCAGCATGTCTCTTCAAGCTAAAACTGGCTGCCCTGGACCT
 hu.25-C 1374 TCGGCTACTGTTAGCCAAAGCTGGACCCACCAGCATGTCTCTTCAAGCTAAAACTGGCTGCCCTGGACCT
 hu.15-C 1374 TCGGCTACTGTTAGCCAAAGCTGGACCCACCAGCATGTCTCTTCAAGCTAAAACTGGCTGCCCTGGACCT
 hu.16-C 1374 TCGGCTACTGTTAGCCAAAGCTGGACCCACCAGCATGTCTCTTCAAGCTAAAACTGGCTGCCCTGGACCT
 hu.11-C 1374 TAGGCTACTGTTAGCCAAAGCTGGACCCACCAGCATGTCTCTTCAAGCTAAAACTGGCTGCCCTGGACCT

hu.10-C	1374	TAGGCTACTGTTTAGCCAAAGCTGGACCCACAGCATGTCTCTTCAAGCTAAAAAAGCTGGCTGCCTGGACCT
hu.4-C	1374	TCGGCTACTGTTTAGCCAAAGCTGGACCAACCAACATGTCTCTTCAAGCTAAAAAAGCTGGCTGCCTGGACCT
rh.54-D	1383	GGAAGTGCAGTTTACCAGGGCGGGCTTCCACCATGGCCGAACAAGCCAGAACTGGTTACCTGGACCT
rh.48-D	1383	GGAAGTGCAGTTTATCAGGGCGGGCTTACCACCATGGCCGAACAAGCCAGAACTGGCTGCCTGGACCT
rh.55-D	1383	GGAAGTGCAGTTTATCAGGGCGGGCTTACCACCATGGCCGAACAAGCCAGAACTGGCTGCCTGGACCT
rh.62-D	1383	GGAAGTGCAGTTTATCAGGGCGGGCTTACCACCATGGCCGAACAAGCCAGAACTGGCTGCCTGGACCT
AAV7-D	1383	GGAAGTGCAGTTTACCAGGGCGGGCTTCAACTATGGCCGAACAAGCCAGAACTGGTTACCTGGACCT
rh.52-E	1383	GCAGTTGCTGTCTTCTCAGGCCGGGCTTAGCAACATGTGGCTCAGGCCAGAACTGGCTGCCTGGACCC
rh.51-E	1383	GCAGTTGCTGTCTTCTCAGGCCGGGCTTAGCAACATGTGGCTCAGGCCAGAACTGGCTGCCTGGACCC
hu.39-E	1383	GCAGTTGCTGTCTTCTCGGGCGGGCTTAGCAACATGTGGCTCAGGCCAGAACTGGCTGCCTGGACCC
rh.53-E	1383	GCAGTTGCTGTCTTCTCAGGCCGGGCTTAGCAACATGTGGCTCAGGCCAGAACTGGCTGCCTGGACCC
hu.37-E	1383	GCAATTGTTATTTTCTCAAGCTGGGCTGCAACATGTGGCTCAGGCTAAGAACTGGCTACCTGGACCT
rh.43-E	1380	GACTCTGGGCTTCAGCCAAAGTGGGCTAATACAATGGCCAATCAGGCCAGAACTGGCTGCCAGGACCC
rh.50-E	1383	GCAGTTGCTGTCTTCTCAGGCCGGGCTTAGCAACATGTGGCTCAGGCCAGAACTGGCTGCCTGGACCC
rh.49-E	1383	GCAGTTGCTGTCTTCTCAGGCCGGGCTTAGCAACATGTGGCTCAGGCCAGAACTGGCTGCCTGGACCC
rh.61-E	1383	GCAGTTGCTGTCTTCTCAGGCCGGGCTTAGCAACATGTGGCTCAGGCCAGAACTGGCTGCCTGGACCC
hu.41-E	1383	GCAATTGTTATTTTCTCAAGCTGGGCTGCAACATGTGGCTCAGGCTAAGAACTGGCTACCTGGACCT
rh.64-E	1383	GCAGTTGCTGTCTTCTCAGGCCGGGCTTAGCAACATGTGGCTCAGGCCAGAACTGGCTGCCTGGACCC
hu.42-E	1383	GCAATTGTTATTTTCTCAAGCTGGGCTGCAACATGTGGCTCAGGCTAAGAACTGGCTACCTGGACCT
rh.57-E	1383	GCAGTTGCTGTCTTCTCAGGCCGGGCTTAGCAACATGTGGCTCAGGCCAGAACTGGCTGCCTGGACCC
hu.40-E	1383	GCAATTGTTATTTTCTCAAGCTGGGCTGCAACATGTGGCTCAGGCTAAGAACTGGCTACCTGGACCT
AAV8-E	1383	GACTCTGGGCTTCAGCCAAAGTGGGCTAATACAATGGCCAATCAGGCCAGAACTGGCTGCCAGGACCC
rh.58-E	1383	GCAGCTGCTGTTTCTCAGGCCGGGCTTAGCAACATGTGGCTCAGGCCAGAACTGGCTGCCTGGACCC
rh.40-E	1383	GCAATTGTTATTTTCTCAAGCTGGGCTGCAACATGTGGCTCAGGCTAAGAACTGGCTACCTGGACCT
hu.67-E	1383	GCAATTGTTATTTTCTCAAGCTGGGCTGCAACATGTGGCTCAGGCTAAGAACTGGCTACCTGGACCT
hu.17-E	1383	GCAGTTGCTATTTTCTCAGGCCGGGCTAATAACATGTGGCTCAGGCCAGAACTGGCTACCCGGGCCC
hu.6-E	1383	GCAGTTGCTATTTTCTCAGGCCGGGCTAATAACATGTGGCTCAGGCCAGAACTGGCTACCCGGGCCC
hu.66-E	1383	GCAATTGTTATTTTCTCAAGCTGGGCTGCAACATGTGGCTCAGGCTAAGAACTGGCTACCTGGACCT
rh.38-E	1383	GCAATTGTTATTTTCTCAAGCTGGGCTGCAACATGTGGCTCAGGCTAAGAACTGGCTACCTGGACCT
hu.32-F	1377	AACGCTAAAAATTCAGCGTGGCCGACCCAGCAACATGGCTGTCCAGGGAAGAACTACATACCTGGACCC

FIG. 3B

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AAV9/hu	1377	AACGCTAAAAATTCAGTGTGGCCGGACCCAGCAACATGGCTGTCCAGGGAAGAACTACATACCTGGACCC	1480	1490	1500	1510	1520	1530	1540
hu.31-F	1377	AACGCTAAAAATTCAGTGTGGCCGGACCCAGCAACATGGCTGTCCAGGGAAGAACTACATACCTGGACCC							
								
AAV5	1405	ATGGGCCGAACCCAGGGCTGGAACCTGGGCTCCGGGTCAAC-----CGCGCCAGTGTCA							
AAV3-3	1447	TGCTACCGCAACAGAGACTTTCAAAGACTGCTAACGACAAC-----AACAAACAGTAACT							
AAV4-4	1429	TCAATCAAGCAGCAGGGCTTCTCAAAGACTGCCAATCAAAACTACAAGATCCCTGCCACCGGTGAGACA							
AAV1-A	1447	TGTTATCGGCAGCAGCGCTTCTAAACAAACAGACAAC-----AACAAACAGCAATT							
hu.46-A	1447	TGTTATCGGCAGCAGCGCTTCTAAACAAACAGACAAC-----AACAAACAGCAATT							
hu.48-A	1447	TGTTATCGGCAGCAGCGCTTCTAAACAAACAGACAAC-----AACAAACAGCAATT							
hu.44-A	1447	TGTTATCGGCAGCAGCGCTTCTAAACAAACAGACAAC-----AACAAACAGCAATT							
hu.43-A	1450	TGTTATCGGCAGCAGCGCTTCTAAACAAACAGACAAC-----AACAAACAGCAATT							
AAV6-A	1447	TGTTACCGGCAGCAGCGCTTCTAAACAAACAGACAAC-----AACAAACAGCAACT							
hu.34-B	1444	TGTTACCGGCAGCAGCGAGTATCAAAGACATCTGCGGATAAC-----AACAAACAGTGAAT							
hu.47-B	1444	TGTTACCGGCAGCAGCGAGTATCAAAGACATCTGCGGATAAC-----AACAAACAGTGAAT							
hu.29-B	1444	TGTTACCGGCAGCAGCGAGTATCAAAGACATCTGCGGATAAC-----AACAAACAGTGAAT							
hu.63-B	1444	TGTTACCGGCAGCAGCGAGTATCAAAGACATCTGCGGATAAC-----AACAAACAGTGAAT							
hu.56-B	1444	TGTTACCGGCAGCAGCGAGTATCAAAGACATCTGCGGATAAC-----AACAAACAGTGAAT							
hu.45-B	1444	TGTTACCGGCAGCAGCGAGTATCAAAGACATCTGCGGATAAC-----AACAAACAGTGAAT							
hu.57-B	1441	TGTTACCGGCAGCAGCGAGTATCAAAGACATCTGCGGATAAC-----AACAAACGGTGAAT							
hu.35-B	1444	TGTTACCGGCAGCAGCGAGTATCAAAGACATCTGCGGATAAC-----AACAAACAGTGAAT							
hu.58-B	1444	TGTTACCGGCAGCAGCGAGTATCAAAGACATCTGCGGATAAC-----AACAAACAGTGAAT							
hu.28-B	1444	TGTTACCGGCAGCAGCGAGTATCAAAGACATCTGCGGATAAC-----AACAAACAGTGAAT							
hu.51-B	1444	TGTTACCGGCAGCAGCGAGTATCAAAGACATCTGCGGATAAC-----AACAAACAGTGAAT							
hu.19-B	1444	TGTTACCGGCAGCAGCGAGTATCAAAGACATCTGCGGATAAC-----AACAAACAGTGAAT							
hu.49-B	1444	TGTTACCGGCAGCAGCGAGTATCAAAGACATCTGCGGATAAC-----AACAAACAGTGAAT							
hu.52-B	1444	TGTTACCGGCAGCAGCGAGTATCAAAGACATCTGCGGATAAC-----AACAAACAGTGAAT							
hu.13-B	1444	TGTTACCGGCAGCAGCGAGTATCAAAGACATCTGCGGATAAC-----AACAAACAGTGAAT							
AAV2-B	1444	TGTTACCGGCAGCAGCGAGTATCAAAGACATCTGCGGATAAC-----AACAAACAGTGAAT							

FIG. 3BG

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hu. 20-B	1444	TGTTACCGCCAGCAGCGAGTATCAAAGACAGCTGCGGACAAC	-----AACAAACAGTGATT
hu. 24-B	1444	TGTTACCGCCAGCAGCGAGTATCAAAGACAGCTGCGGACAAC	-----AACAAACAGTGATT
hu. 64-B	1444	TGTTACCGCCAGCAGCGAGTATCAAAGACATCTGCGGATAAC	-----AACAAACAGTGAAT
hu. 27-B	1444	TGTTACCGCCAGCAGCGAGTATCAAAGACAGCTGCGGACAAC	-----AACAAACAGTGATT
hu. 21-B	1444	TGTTACCGCCAGCAGCGAGTATCAAAGACAGCTGCGGACAAC	-----AACAAACAGTGATT
hu. 22-B	1444	TGTTACCGCCAGCAGCGAGTATCAAAGACAGCTGCGGACAAC	-----AACAAACAGTGATT
hu. 23-B	1444	TGTTACCGCCAGCAGCGAGTATCAAAGACAGCTGCGGACAAC	-----AACAAACAGTGATT
hu. 7-C	1444	TGCTACAGACAGCAGCGTCTGTCAAAGCAGGCAACGACAAC	-----AACAAACAGCAACT
hu. 61-C	1444	TGCTACAGACAGCAGCGTCTGTCAAAGCAGGCAACGACAAC	-----AACAAACAGCAACT
rh. 56-C	1444	TGCTACAGACAGCAGCGTCTGTCAAAGCAGGCAACGACAAC	-----AACAAACAGCAACT
hu. 9-C	1444	TGCTACAGACAGCAGCGTCTTCAAGCAGGCAACGACAAC	-----AACAAACAGCAACT
hu. 54-C	1441	TGTTATCGCCAGCAGCGTTTGTCAAAGCAGGCAACGACAAC	-----AACAAACAGCAACT
hu. 53-C	1441	TGTTATCGCCAGCAGCGTTTGTCAAAGCAGGCAACGACAAC	-----AACAAACAGCAACT
hu. 60-C	1444	TGCTACAGACAGCAGCGTCTGTCAAAGCAGGCAACGACAAC	-----AACAAACAGCAACT
hu. 55-C	1441	TGTTATCGCCAGCAGCGTTTGTCAAAGCAGGCAACGACAAC	-----AACAAACAGCAACT
hu. 2-C	1444	TGCTACAGACAGCAGCGTCTGTCAAACAGGCAACGACAAC	-----AACAAACAGCAACT
hu. 1-C	1444	TGCTACAGACAGCAGCGTCTGTCAAACAGGCAACGCGCAAC	-----AACAAACAGCAACT
hu. 18-C	1444	TGCTACAGACAGCAGCGTCTGTCAAAGCAGGCAACGACAAC	-----AACAAACAGCAACT
hu. 3-C	1447	TGCTACAGACAGCAGCGTCTGTCAAACAGGCAACGACAAT	-----AACAACTGCAACT
hu. 25-C	1444	TGCTACAGACAGCAGCGTCTGTCAAAGCAGGCAACGACAAC	-----AACAAACAGCAACT
hu. 15-C	1444	TGCTACAGACAGCAGCGTCTGTCAAAGCAGGCAACGACAAC	-----AACAAACAGCAACT
hu. 16-C	1444	TGCTACAGACAGCAGCGTCTGTCAAAGCAGGCAACGACAAC	-----AACAAACAGCAACT
hu. 11-C	1444	TGCTACAGACAGCAGCGTCTTCAAAGCAGGCAACGACAAC	-----AACAAACAGCAACT
hu. 10-C	1444	TGCTACAGACAGCAGCGTCTTCAAAGCAGGCAACGACAAC	-----AACAAACAGCAACT
hu. 4-C	1444	TGCTACAGACAGCAGCGTCTGTCAAACAGGCAACGACAAC	-----AACAAACAGCAACT
rh. 54-D	1453	TGCTCCGGCAACAAGAGTTTCCAAAACACTGGATCAAAAC	-----AACAAACAGCAACT
rh. 48-D	1453	TGCTCCGGCAACAAGAGTCTCCAAGACGCTGGATCAAAAC	-----AACAAACAGCAACT
rh. 55-D	1453	TGCTCCGGCAACAAGAGTCTCCAAGACGCTGGATCAAAAC	-----AACAAACAGCAACT
rh. 62-D	1453	TGCTCCGGCAACAAGAGTCTCCAAGACGCTGGATCAAAAC	-----AACAAACAGCAACT
AAV7-D	1453	TGCTCCGGCAACAAGAGTCTCCAACAAACGCTGGATCAAAAC	-----AACAAACAGCAACT

FIG. 3BH

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rh. 52-E	1453	TGCTACAGACAGCAGCGCGTCTCCACGACACTGTGCGAAAAC	1550	1560	1570	1580	1590	1600	1610
rh. 51-E	1453	TGCTACAGACAGCAGCGCGTCTCCACGACACTGTGCGAAAAC							
hu. 39-E	1453	TGCTACAGACAGCAGCGCGTCTCCACGACACTGTGCGAAAAC							
rh. 53-E	1453	TGCTACAGACAGCAGCGCGTCTCCACGACACTGTGCGAAAAC							
hu. 37-E	1453	TGCTACCGGCAGCAGCGAGTCTCTACGACACTGTGCGAAAAC							
rh. 43-E	1450	TGTTACCGCCAACAACGCGTCTCAACGACAACCGGGCAAAAAC							
rh. 50-E	1453	TGCTACAGACAGCAGCGCGTCTCCACGACACTGTGCGAAAAC							
rh. 49-E	1453	TGCTACAGACAGCAGCGCGTCTCCACGACACTGTGCGAAAAC							
rh. 61-E	1453	TGCTACAGACAGCAGCGCGTCTCCACGACACTGTGCGAAAAC							
hu. 41-E	1453	TGCTACCGGCAGCAGCGAGTCTCTACGACACTGTGCGAAAAC							
rh. 64-E	1453	TGCTACAGACAGCAGCGCGTCTCCACGACACTGTGCGAAAAC							
hu. 42-E	1453	TGCTACCGGCAGCAGCGAGTCTCTACGACACTGTGCGAAAAC							
rh. 57-E	1453	TGCTACAGACAGCAGCGCGTCTCCACGACACTGTGCGAAAAC							
hu. 40-E	1453	TGCTACCGGCAGCAGCGAGTCTCTACGACACTGTGCGAAAAC							
AAV8-E	1453	TGTTACCGCCAACAACGCGTCTCAACGACAACCGGGCAAAAAC							
rh. 58-E	1453	TGCTACAGACAGCAGCGCGTCTCCACGACACTGTGCGAAAAC							
rh. 40-E	1453	TGCTACCGGCAGCAGCGAGTCTCTACGACACTGTGCGAAAAC							
hu. 67-E	1453	TGCTACCGGCAGCAGCGAGTCTCTACGACACTGTGCGAAAAC							
hu. 17-E	1453	TGCTACCGGCAGCAACGCGTCTCCACGACACTGTGCGAAAAC							
hu. 6-E	1453	TGCTACCGGCAGCAACGCGTCTCCACGACACTGTGCGAAAAC							
hu. 66-E	1453	TGCTACCGGCAGCAGCGAGTCTCTACGACACTGTGCGAAAAC							
rh. 38-E	1453	TGCTACCGGCAGCAGCGAGTCTCTACGACACTGTGCGAAAAC							
hu. 32-F	1447	AGTACCGACAACAACGTTCTCAACCACTGTGACTCAAAAAC							
AAV9/hu	1447	AGTACCGACAACAACGTTCTCAACCACTGTGACTCAAAAAC							
hu. 31-F	1447	AGTACCGACAACAACGTTCTCAACCACTGTGACTCAAAAAC							
AAV5	1460	GCGCCTTCGCCACGACCAATAGGATGGAGCTCGAGGGCGCGAGTTACCGAGTGCCCCCGCAGCGCAACGG							
AAV3-3	1502	TTCCCTGGACAGCGGCCAGCAAAATATCATCTCAATGGCCGCGACTCGCTGGTGAATCCAGGACCCAGCTAT							

FIG. 3BI

AAV4-4- 1499 GTCTCATCAAATACGAGACGCACAGCACTCTGGACGGAAGATGGAGTGCCCTGACCCCCGGACCTCCAAT
 AAV1-A- 1502 TTACCTGGACTGGTGCTTCAAAATATAACCTCAATGGGCGTGAATCCATCAACCCCTGGCACTGCTAT
 hu.46-A 1502 TTACCTGGACTGGTGCTTCAAAATATAACCTCAATGGGCGTGAATCCATCAACCCCTGGCACTGCTAT
 hu.48-A 1502 TTACCTGGACTGGTGCTTCAAAATATAACCTCAATGGGCGTGAATCCATCAACCCCTGGCACTGCTAT
 hu.44-A 1502 TTACCTGGACTGGTGCTTCAAAATATAACCTCAATGGGCGTGAATCCATCAACCCCTGGCACTGCTAT
 hu.43-A 1505 TTACCTGGACTGGTGCTTCAAAATATAACCTCAATGGGCGTGAATCCATCAACCCCTGGCACTGCTAT
 AAV6-A 1502 TTACCTGGACTGGTGCTTCAAAATATAACCTTAATGGGCGTGAATCTATAATCAACCCCTGGCACTGCTAT
 hu.34-B 1499 ACTCGTGGACTGGAGCTACCAAGTACCACCTCAATGGCAGAGACTCTCTGGTGAATCCGGGCCCCGGCCAT
 hu.47-B 1499 ACTCGTGGACTGGAGCTACCAAGTACCACCTCAATGGCAGAGACTCTCTGGTGAATCCGGGCCCCGGCCAT
 hu.29-B 1499 ACTCGTGGACTGGAGCTACCAAGTACCACCTCAATGGCAGAGACTCTCTGGTGAATCCGGGCCCCGGCCAT
 hu.63-B 1499 ACTCGTGGACTGGAGCTACCAAGTACCACCTTAATGGAAGAGACTCTCTGGTGAATCCGGGCCCCGGCCAT
 hu.56-B 1499 ACTCGTGGACTGGAGCTACCAAGTACCACCTCAATGGCAGAGACTCTCTGGTGAATCCGGGCCCCGGCCAT
 hu.45-B 1499 ACTCGTGGACTGGAGCTACCAAGTACCACCTCAATGGCAGAGACTCTCTGGTGAATCCGGGCCCCGGCCGT
 hu.57-B 1496 ACTCGTGGACTGGAGCTACCAAGTACCACCTCAATGGCAGAGACTCTCTGGTGAATCCGGGCCCCGGCCAT
 hu.35-B 1499 ACTCGTGGACTGGAGCTACCAAGTACCACCTCAATGGCAGAGACTCTCTGGTGAATCCGGGCCCCGGCCAT
 hu.58-B 1499 ACTCGTGGATGGAGCTACCAAGTACCACCTCAATGGCAGAGACTCTCTGGTGAATCCGGGCCCCGGCAAT
 hu.28-B 1499 ACTCGTGGACTGGAGCTACCAAGTACCACCTCAATGGCAGAGACTCTCTGGTGAATCCGGGCCCCGGCCAT
 hu.51-B 1499 ACTCGTGGACTGGAGCTACCAAGTACCACCTCAATGGCAGAGACTCTCTGGTGAATCCGGGCCCCGGCCAT
 hu.19-B 1499 ACTCGTGGACTGGAGCTACCAAGTACCACCTCAATGGAAAGAGACTCTCTGGTGAATCCGGGCCCCAGCTAT
 hu.49-B 1499 ACTCGTGGACTGGAGCTACCAAGTACCACCTCAATGGCAGAGACTCTCTGGTGAATCCGGGCCCCGGCCAT
 hu.52-B 1499 ACTCGTGGACTGGAGCTACCAAGTACCACCTCAATGGCAGAGACTCTCTGGTGAATCCGGGCCCCGGCCAT
 hu.13-B 1499 ACTCGTGGACTGGAGCTACCAAGTACCACCTCAATGGCAGAGACTCTCTGGTGAATCCGGGCCCCGGCCAT
 AAV2-B 1499 ACTCGTGGACTGGAGCTACCAAGTACCACCTCAATGGCAGAGACTCTCTGGTGAATCCGGGCCCCGGCCAT
 hu.20-B 1499 ACTCGTGGACTGGAGCTACCAAGTACCACCTCAATGGAAAGAGACTCTCTGGTGAATCCGGGCCCCAGCTAT
 hu.24-B 1499 ACTCGTGGACTGGAGCTACCAAGTACCACCTCAATGGAAAGAGACTCTCTGGTGAATCCGGGCCCCAGCTAT
 hu.64-B 1499 ACTCGTGGACTGGAGCTACCAAGTACCACCTTAATGGAAGAGACTCTCTGGTGAATCCGGGCCCCGGCCAT
 hu.27-B 1499 ACTCGTGGACTGGAGCTACCAAGTACCACCTCAATGGAAAGAGACTCTCTGGTGAATCCGGGCCCCAGCTAT
 hu.21-B 1499 ACTCGTGGACTGGAGCTACCAAGTACCACCTCAATGGAAAGAGACTCTCTGGTGAATCCGGGCCCCAGCTAT
 hu.22-B 1499 ACTCGTGGACTGGAGCTACCAAGTACCACCTCAATGGAAAGAGACTCTCTGGTGAATCCGGGCCCCAGCTAT
 hu.23-B 1499 ACTCGTGGACTGGAGCTACCAAGTACCACCTCAATGGAAAGAGACTCTCTGGTGAATCCGGGCCCCAGCTAT

hu. 7-C	1499	TTCCCTGGACTCGGGCTACAAAGTATCACCTAAATGGCCGGGACTCGTTGGTTAATCCAGGACCAGCTAT
hu. 61-C	1499	TTCCCTGGAGCGAGCTACAAAGTATCATCTAAATGGCCGGGACTCGTTGGTTAATCCAGGACCAGCTAT
rh. 56-C	1499	TTCCCTGGACTCGGGCTACAAAGTACCACTAAATGGCCGGGACTCGTTGGTTAATCCAGGACCAGCTAT
hu. 9-C	1499	TTCCCTGGACTCGGGCTACAAAGTATCATCTAAATGGCCGGGACTCGTTGGTTAATCCAGGACCAGCTAT
hu. 54-C	1496	TTCCCTGGACTGGAGCTACCAAGTACCACTCAATGGCGGAGACTCTTTGGTGAACCCGGGCCCGGCCAT
hu. 53-C	1496	TTCCCTGGACTGGAGCTACCAAGTACTACTCAATGGCAGAGACTCTTTGGTGAACCCGGGCCCGGCCAT
hu. 60-C	1499	TTCCCTGGACTGCAGCTACAAAGTATCATCTAAATGGCCGGGACTCGTTGGTTAATCCAGGACCAGCTAT
hu. 55-C	1496	TTCCCTGGACTGGAGCTACCAAGTACCACTCAATGGCAGAGACTCTTTGGTGAACCCGGGCCCGGCCAT
hu. 2-C	1499	TTCCCTGGACTGCAGCTACAAAGTATCATCTAAATGGCCGGGACTCGTTGGTTAATCCAGGACCAGCTAT
hu. 1-C	1499	TTCCCTGGACTGCAGCTACAAAGTATCATCTAAATGGCCGGGACTCGTTGGTTAATCCAGGACCAGCTAT
hu. 18-C	1499	TTCCCTGGACTCGGGCTACAAAGTATCATCTAAATGGCCGGGACTCGTTGGTTAATCCAGGACCAGCTAT
hu. 3-C	1502	TTCCCTGGACTGCAGCTACAAAGTATCATCTAAATGGCCGGGACTCGTTGGTTAATCCAGGACCAGCTAT
hu. 25-C	1499	TTCCCTGGACTGCAGCTACAAAGTATCATCTAAATGGCCGGGACTCGTTGGTTAATCCAGGACCAGCTAT
hu. 15-C	1499	TTCCCTGGACTCGGGCTACAAAGTATCATCTAAATGGCCGGGACTCGTTGGTTAATCCAGGACCAGCTAT
hu. 16-C	1499	TTCCCTGGACTCGGGCTACAAAGTATCATCTAAATGGCCGGGACTCGTTGGTTAATCCAGGACCAGCTAT
hu. 11-C	1499	TTCCCTGGACTCGGGCTACAAAGTATCGTCTAAATGGCCGGGACTCGTTGGTTAATCCAGGACCAGCTAT
hu. 10-C	1499	TTCCCTGGACTCGGGCTACAAAGTATCATCTAAATGGCCGGGACTCGTTGGTTAATCCAGGACCAGCTAT
hu. 4-C	1499	TTCCCTGGACTGCAGCTACAAAGTATCATCTAAATGGCCGGGACTCGTTGGTTAATCCAGGACCAGCTAT
rh. 54-D	1508	TTGCTTGGACTGGTGGCCACCAAAATACCATCTAAATGGAAGAAATTCATTGGTTAATCCCGGTGTCGCCAT
rh. 48-D	1508	TTGCTTGGACTGGTGGCCACCAAAATACCATCTAAATGGAAGAAATTCATTGGTTAATCCCGGTGTCGCCAT
rh. 55-D	1508	TTGCTTGGACTGGTGGCCACCAAAATACCATCTAAATGGAAGAAATTCATTGGTTAATCCCGGTGTCGCCAT
rh. 62-D	1508	TTGCTTGGACTGGTGGCCACCAAAATACCATCTAAATGGAAGAAATTCATTGGTTAATCCCGGTGTCGCCAT
AAV7-D	1508	TTGCTTGGACTGGTGGCCACCAAAATACCATCTAAATGGAAGAAATTCATTGGTTAATCCCGGTGTCGCCAT
rh. 52-E	1508	TTGCCTGGACTGGTGGCCACCAAGTATCATCTGAACGGCAGAGACTCTCTGGTGAATCCGGGCGTCGCCAT
rh. 51-E	1508	TTGCCTGGACTGGTGGCCACCAAGTATCATCTGAACGGCAGAGACTCTCTGGTGAATCCGGGCGTCGCCAT
hu. 39-E	1508	TTGCCTGGACTGGTGGCCACCAAGTATCATCTGAACGGCAGAGACTCTCTGGTGAATCCGGGCGTCGCCAT
rh. 53-E	1508	TTGCCTGGACTGGTGGCCACCAAGTATCATCTGAACGGCAGAGACTCTCTGGTGAATCCGGGCGTCGCCAT
hu. 37-E	1508	TTGCTTGGACTGGTGGCCACCAAAATACCATCTGAACGGGAAAGAGACTCTTTGGTAAATCCCGGTGTCGCCAT
rh. 43-E	1505	TTGCCTGGACTGGTGGCCACCAAAATACCATCTGAATGGAAGAAATTCATTGGTTAATCCCGGTGTCGCCAT
rh. 50-E	1508	TTGCCTGGACTGGTGGCCACCAAGTATCATCTGAACGGCAGAGACTCTCTGGTGAATCCGGGCGTCGCCAT

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rh. 49-E	1508	TTGCCCTGGACTGGTGCACCAAGTATCATCTGAACGGCAGAGACTCTCTGGTGAATCCGGGCGTCGCCAT	1620	1630	1640	1650	1660	1670	1680
rh. 61-E	1508	TTGCCCTGGACTGGTGCACCAAGTATCATCTGAACGGCAGAGACTCTCTGGTGAATCCGGGCGTCGCCAT						
hu. 41-E	1508	TTGCTTGGACTGGTGCACCAAAATATCACCTGAACGGAGAGACTCTTTGGTAAATCCCGGTGTCGCCAT							
rh. 64-E	1508	TTGCCCTGGACTGGTGCACCAAGTATCATCTGAACGGCAGAGACTCTCTGGTGAATCCGGGCGTCGCCAT							
hu. 42-E	1508	TTGCTTGGACTGGTGCACCAAAATATCACCTGAACGGAGAGACTCTTTGGTAAATCCCGGTGTCGCCAT							
rh. 57-E	1508	TTGCCCTGGACTGGTGCACCAAGTATCATCTGAACGGCAGAGACTCTCTGGTGAATCCGGGCGTCGCCAT							
hu. 40-E	1508	TTGCTTGGACTGGTGCACCAAAATATCACCTGAACGGAGAGACTCTTTGGTAAATCCCGGTGTCGCCAT							
AAV8-E	1508	TTGCCCTGGACTGGTGCACCAAAATATCACCTGAATGGAAGAAATTCATTTGGCTAATCCTGGCATCGCTAT							
rh. 58-E	1508	TTGCCCTGGACTGGTGCACCAAGTATCATCTGAACGGCAGAGACTCTCTGGTGAATCCGGGCGTCGCCAT							
rh. 40-E	1508	TTGCTTGGACTGGTGCACCAAAATATCACCTGAACGGAGAGACTCTTTGGTAAATCCCGGTGTCGCCAT							
hu. 67-E	1508	TTGCTTGGACTGGTGCACCAAAATATCACCTGAACGGAGAGACTCTTTGGTAAATCCCGGTGTCGCCAT							
hu. 17-E	1508	TTGCTTGGACTGGTGCACCAAGTATCATCTGAATGGCAGAGACTCTCTGGTAAATCCCGGTGTCGCCAT							
hu. 6-E	1508	TTGCTTGGACTGGTGCACCAAGTATCATCTGAATGGCAGAGACTCTCTGGTAAATCCCGGTGTCGCCAT							
hu. 66-E	1508	TTGCTTGGACTGGTGCACCAAAATATCACCTGAACGGAGAGACTCTTTGGTAAATCCCGGTGTCGCCAT							
rh. 38-E	1508	TTGCTTGGACTGGTGCACCAAAATATCACCTGAACGGAGAGACTCTTTGGTAAATCCCGGTGTCGCCAT							
hu. 32-F	1502	TTGCTTGGCTGGAGCTTCTTCTTGGGCTCTCAATGGACGTAATAGCTTGATGAATCCTGGACCTGCTAT							
AAV9/hu	1502	TTGCTTGGCTGGAGCTTCTTCTTGGGCTCTCAATGGACGTAATAGCTTGATGAATCCTGGACCTGCTAT							
hu. 31-F	1502	TTGCTTGGCTGGAGCTTCTTCTTGGGCTCTCAATGGACGTAATAGCTTGATGAATCCTGGACCTGCTAT							
AAV5	1530	CATGACCAACAACCTCCAGGGCAGCAACACCTATGCCCTGGAGAACACTATGATCTTCAACAGCCAGCCG						
AAV3-3	1572	GGCCAGTCACAAGGACGATGAAGAAAAATTTTCCCTATGCACGGCAATCTAATAATTTGGCAAAGAAGG							
AAV4-4	1569	GGCCACGGCTGGACCTCGGACAGCAAGTTCAGC---AACAGCCAGCTCATCTTTGCGGGGCTTAAACAG							
AAV1-A	1572	GGCCTCACACAAAGACGACGAAGACAAGTCTTTCCCATGAGCGGTGTCATGATTTTGGAAAAGAGAGC							
hu. 46-A	1572	GGCCTCACACAAAGACGACGAAGACAAGTCTTTCCCATGAGCGGTGTCATGATTTTGGAAAAGAGAGC							
hu. 48-A	1572	GGCCTCACACAAAGACGACGAAGACAAGTCTTTCCCATGAGCGGTGTCATGATTTTGGAAAAGAGAGC							
hu. 44-A	1572	GGCCTCACACAAAGACGACGAAGACAAGTCTTTCCCATGAGCGGTGTCATGATTTTGGAAAAGAGAGC							
hu. 43-A	1575	GGCCTCACACAAAGACGACGAAGACAAGTCTTTCCCATGAGCGGTGTCATGATTTTGGAAAAGAGAGC							
AAV6-A	1572	GGCCTCACACAAAGACGACGAAGACAAGTCTTTCCCATGAGCGGTGTCATGATTTTGGAAAAGAGAGC							

FIG. 3B1

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hu. 34-B 1569 GGCAAGCCACAAGGACGATGAAGAAAAAGTTTTTCTCAGAGCGGGTCTCATCTTTGGGAAGCAAGGC
 hu. 47-B 1569 GGCAAGCCACAAGGACAAATGAAGAAAAAGTTTTTCTCAGAGCGGGTCTCATCTTTGGGAAGCAAGGC
 hu. 29-B 1569 GGCAAGCCACAAGACGATGAAGAAAAAGTTTTTCTCAGAGCGGGTCTTATCTTTGGGAAGCAAGGC
 hu. 63-B 1569 GGCAAGCCACAAGGACGATGAAGAAAAAGTTTTTCTCAGAGCGGGTCTCATCTTTGGAAAAACAAGAC
 hu. 56-B 1569 GGCAAGCCACAAGGACGATGAAGAAAAAGTTTTTCTCAAAGCGGGTCTCATCTTTGGGAAGCAAGGC
 hu. 45-B 1569 GGCAAGCCACAAGGACGATGAAGAAAAAGTTTTTCTCAGAGCGGGTCTCATCTTTGGGAAGCAAGGC
 hu. 57-B 1566 GGCAAGCCACAAGGACGATGAAGAAAAAGTTTTTCTCAAAGCGGGTCTCATCTTTGGGAAGCAAGGC
 hu. 35-B 1569 GGCAAGCCACAAGGACGATGAAGAAAAAGTTTTTCTCAGAGCGGGTCTCATCTTTGGGAAGCAAGGC
 hu. 58-B 1569 GGCAAGCCACAAGGACGATGAAGAAAAAGTTTTTCTCAGAGCGGGTCTCATCTTTGGAAAAACAAGGA
 hu. 28-B 1569 GGCAAGCCACAAGGACGATGAAGAAAAAGTTTTTCTCAGAGCGGGTCTTATCTTTGGGAAGCAAGGC
 hu. 51-B 1569 GGCAAGCCACAAGGACAAATGAAGAAAAAGTTTTTCTCAGAGCGGGTCTCATCTTTGGGAAGCAAGGC
 hu. 19-B 1569 GGCAAGCCACAAGGACGATGAAGAAAAATATTTCTCAGAGCGGGTCTCATCTTTGGAAAAACAAGAC
 hu. 49-B 1569 GGCAAGCCACAAGGACGATGAAGAAAAAGTTTTTCTCAAAGCGGGTCTCATCTTTGGGAAGCAAGGC
 hu. 52-B 1569 GGCAAGCCACAAGGACAAATGAAGAAAAAGTTTTTCTCAGAGCGGGTCTCATCTTTGGGAAGCAAGGC
 hu. 13-B 1569 GGCAAGCCACAAGGACGATGAAGAAAAAGTTTTTCTCAGAGCGGGTCTCATCTTTGGGAAGCAAGGC
 AAV2-B 1569 GGCAAGCCACAAGGACGATGAAGAAAAAGTTTTTCTCAGAGCGGGTCTCATCTTTGGGAAGCAAGGC
 hu. 20-B 1569 GGCAAGCCACAAGGACGATGAAGAAAAATATTTCTCAGAGCGGGTCTCATCTTTGGAAAAACAAGAC
 hu. 24-B 1569 GGCAAGCCACAAGGACGATGAAGAAAAATATTTCTCAGAGCGGGTCTCATCTTTGGAAAAACAAGAC
 hu. 64-B 1569 GGCAAGCCACAAGGACGATGAAGAAAAAGTTTTTCTCAGAGCGGGTCTCATCTTTGGAAAAACAAGAC
 hu. 27-B 1569 GGCAAGCCACAAGGACGATGAAGAAAAATATTTCTCAGAGCGGGTCTCATCTTTGGAAAAACAAGAC
 hu. 21-B 1569 GGCAAGCCACAAGGACGATGAAGAAAAATATTTCTCAGAGCGGGTCTCATCTTTGGAAAAACAAGAC
 hu. 22-B 1569 GGCAAGCCACAAGGACGATGAAGAAAAATATTTCTCAGAGCGGGTCTCATCTTTGGAAAAACAAGAC
 hu. 23-B 1569 GGCAAGCCACAAGGACGATGAAGAAAAATATTTCTCAGAGCGGGTCTCATCTTTGGAAAAACAAGAC
 hu. 7-C 1569 GGCAAGCCACAAGGACGATGAAGAAAAAGTTTTTCCCCATGCATGGAACCCCTGATATTTGGTAAACAAGGA
 hu. 61-C 1569 GGCAAGCCACAAGGATGACGAAGAAAAAGTTTTTCCCCATGCATGGAACCCCTATATTTGGTAAACAAGGA
 rh. 56-C 1569 GGCAAGCCACAAGGACGATGAAGAAAAAGTTTTTCCCCATGCATGGAACCCCTGATATTTGGTAAACAAGGA
 hu. 9-C 1569 GGCAAGCCACAAGGACGATGAAGAAAAAGTTTTTCCCCATGCATGGAACCCCTGATATTTGGTAAACAAGGA
 hu. 54-C 1566 GGCAAGCCACAAGGACGATGAAGAAAAAGTTTTTCCCCATGCATGGAACCCCTAAATATTTGGTAAAGAAAGGA
 hu. 53-C 1566 GGCAAGCCACAAGGACGATGAAGAAAAAGTTTTTCCCCATGCATGGAACCCCTAAATATTTGGTAAAGAAAGGA
 hu. 60-C 1569 GGCAAGCCACAAGGATGACGAAGAAAAAGTTTTTCCCCATGCATGGAACCCCTATATTTGGTAAACAAGGA

FIG. 3BM

hu. 55-C 1566 GGCCAGCCACAAGGACGATGAAGAAAAGTTTTCCTCCCATGCAATGGAACCCCTAATATTTGGTAAAGAAAGGA
 hu. 2-C 1569 GGCCAGTCACAAGGATGACGAAGAAAAGTTTTCCTCCCATGCAATGGAACCCCTGATATTTGGTAAACAAGGA
 hu. 1-C 1569 GGCCAGTCACAAGGATGACGAAGAAAAGTTTTCCTCCCATGCAATGGAACCCCTGATATTTGGTAAACAAGGA
 hu. 18-C 1569 GGCCAGCCACAAGACGATGAAGAAAAGTTTTCCTCCCATGCAATGGAACCCCTGATATTTGGTAAACAAGGA
 hu. 3-C 1572 GGCCAGTCACAAGGATGACGAAGAAAAGTTTTCCTCCCATGCAATGGAACCCCTGATATTTGGTAAACAAGGA
 hu. 25-C 1569 GGCCAGTCACAAGGATGACGAAGAAAAGTTTTCCTCCCATGCAATGGAACCCCTGATATTTGGTAAACAAGGA
 hu. 15-C 1569 GGCCAGCCACAAGACGATGAAGAAAAGTTTTCCTCCCATGCAATGGAACCCCTGATATTTGGTAAACAAGGA
 hu. 16-C 1569 GGCCAGCCACAAGACGATGAAGAAAAGTTTTCCTCCCATGCAATGGAACCCCTGATATTTGGTAAACAAGGA
 hu. 11-C 1569 GGCCAGCCACAAGACGATGAAGAAAAGTTTTCCTCCCATGCAATGGAACCCCTGATATTTGGTAAACAAGGA
 hu. 10-C 1569 GGCCAGCCACAAGACGATGAAGAAAAGTTTTCCTCCCATGCAATGGAACCCCTGATATTTGGTAAACAAGGA
 hu. 4-C 1569 GGCCAGTCACAAGGATGACGAAGAAAAGTTTTCCTCCCATGCAATGGAACCCCTGATATTTGGTAAACAAGGA
 rh. 54-D 1578 GGCAACTCAAAAGGACGACGAGGACCGCTTTTCCCATCCAGCGGAGTCCCTGATTTTGGAAAAAAGTGA
 rh. 48-D 1578 GGCAACCCACAAGGACGACGAGGACCGCTTCTCCCTTCGAGCGGAGTCCCTGATTTTGGAAAAAAGTGA
 rh. 55-D 1578 GGCAACCCACAAGGACGACGAGGACCGCTTCTCCCTTCGAGCGGAGTCCCTGATTTTGGAAAAAAGTGA
 rh. 62-D 1578 GGCAACCCACAAGGACGACGAGGACCGCTTCTCCCTTCGAGCGGAGTCCCTGATTTTGGAAAAAAGTGA
 AAV7-D 1578 GGCAACTCAAAAGGACGACGAGGACCGCTTTTCCCATCCAGCGGAGTCCCTGATTTTGGAAAAAAGTGA
 rh. 52-E 1578 GGCAACCAACAAGGACGACGAGGACCGCTTCTCCCATCCAGCGGATCCCTCATGTTTGGCAAGCAGGGA
 rh. 51-E 1578 GGCAACCAACAAGGACGACGAGGACCGCTTCTCCCATCCAGCGGATCCCTCATGTTTGGCAAGCAGGGA
 hu. 39-E 1578 GGCAACCAACAAGGACGACGAGGACCGCTTCTCCCATCCAGCGGATCCCTCATGTTTGGCAAGCAGGGA
 rh. 53-E 1578 GGCAACCAACAAGGACGACGAGGACCGCTTCTCCCATCCAGCGGATCCCTCATGTTTGGCAAGCAGGGA
 hu. 37-E 1578 GGCAACCCACAAGGACGACGAGGACCGCTTCTCCCGTCGAGTGGAGTCCCTGATGTTTGGAAAAACAGGGT
 rh. 43-E 1575 GGCAACACACAAGACGACGAGGAGCGTTTTCCTCCAGTAACGGGA--TCCTGTTTTCGCAACAATAAT
 rh. 50-E 1578 GGCAACCAACAAGGACGACGAGGACCGCTTCTCCCATCCAGCGGATCCCTCATGTTTGGCAAGCAGGGA
 rh. 49-E 1578 GGCAACCAACAAGGACGACGAGGACCGCTTCTCCCATCCAGCGGATCCCTCATGTTTGGCAAGCAGGGA
 rh. 61-E 1578 GGCAACCAACAAGGACGACGAGGACCGCTTCTCCCATCCAGCGGATCCCTCATGTTTGGCAAGCAGGGA
 hu. 41-E 1578 GGCAACCCACAAGGACGACGAGGACCGCTTCTCCCGTCGAGTGGAGTCCCTGATGTTTGGAAAAACAGGGT
 rh. 64-E 1578 GGCAACCAACAAGGACGACGAGGACCGCTTCTCCCATCCAGCGGATCCCTCATGTTTGGCAAGCAGGGA
 hu. 42-E 1578 GGCAACCCACAAGGACGACGAGGACCGCTTCTCCCGTCGAGTGGAGTCCCTGATGTTTGGAAAAACAGGGT
 rh. 57-E 1578 GGCAACCAACAAGGACGACGAGGACCGCTTCTCCCATCCAGCGGATCCCTCATGTTTGGCAAGCAGGGA
 hu. 40-E 1578 GGCAACCCACAAGGACGACGAGGACCGCTTCTCCCGTCGAGTGGAGTCCCTGATGTTTGGAAAAACAGGGT

FIG. 3BN

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AAV8-E	1578	GGCAACACACAAAAGACGACGAGGAGCGTTTTC	1690	1700	1710	1720	1730	1740	1750
rh.58-E	1578	GGCAACCAACAAGACGACGAGGACCGCTTCTTCC	1578	1588	1598	1608	1618	1628	1638
rh.40-E	1578	GGCAACGCATAAGGACGACGAGGAACGTTCTTCC	1578	1588	1598	1608	1618	1628	1638
hu.67-E	1578	GGCAACCCACAAGACGACGAGGAACGCTTCTTCC	1578	1588	1598	1608	1618	1628	1638
hu.17-E	1578	GGCAACGCACAAGACGACGAGGAACGATTTTTC	1578	1588	1598	1608	1618	1628	1638
hu.6-E	1578	GGCAACGCACAAGACGACGAGGAACGATTTTTC	1578	1588	1598	1608	1618	1628	1638
hu.66-E	1578	GGCAACCCACAAGACGACGAGGAACGCTTCTTCC	1578	1588	1598	1608	1618	1628	1638
rh.38-E	1578	GGCAACCCACAAGACGACGAGGAACGCTTCTTCC	1578	1588	1598	1608	1618	1628	1638
hu.32-F	1572	GGCAGCCACAAGAGGAGGAGGACCGTTTCTTCC	1572	1582	1592	1602	1612	1622	1632
AAV9/hu	1572	GGCAGCCACAAGAGGAGGAGGACCGTTTCTTCC	1572	1582	1592	1602	1612	1622	1632
hu.31-F	1572	GGCAGCCACAAGAGGAGGAGGACCGTTTCTTCC	1572	1582	1592	1602	1612	1622	1632
AAV5	1600	GCGAACCCGGCACCACCGCCACGTACCTCGAGGG	1600	1610	1620	1630	1640	1650	1660
AAV3-3	1642	ACA-----ACGGCAAGTAACGCAGAAATTAGAT	1642	1652	1662	1672	1682	1692	1702
AAV4-4	1636	AAC-----GGCAACACGGCCACCGTACCCGGG	1636	1646	1656	1666	1676	1686	1696
AAV1-A	1642	GCC-----GGAGCTTCAAAACACTGCATTGGAC	1642	1652	1662	1672	1682	1692	1702
hu.46-A	1642	GCC-----GGAGCTTCAAAACACTGCATTGGAC	1642	1652	1662	1672	1682	1692	1702
hu.48-A	1642	GCC-----GGAGCTTCAAGCACTGCATTGGAC	1642	1652	1662	1672	1682	1692	1702
hu.44-A	1642	GCC-----GGAGCTTCAAAACACTGCATTGGAC	1642	1652	1662	1672	1682	1692	1702
hu.43-A	1645	GCC-----GGAGCTTCAAAACACTGCATTGGAC	1645	1655	1665	1675	1685	1695	1705
AAV6-A	1642	GCC-----GGAGCTTCAAAACACTGCATTGGAC	1642	1652	1662	1672	1682	1692	1702
hu.34-B	1639	TCA-----GAGAAAACAAATGTGGACATTGAA	1639	1649	1659	1669	1679	1689	1699
hu.47-B	1639	TCA-----GAGAAAACAAATGTGGACATTGAA	1639	1649	1659	1669	1679	1689	1699
hu.29-B	1639	CCA-----GAGAAAACAAATGTGGATATTGAA	1639	1649	1659	1669	1679	1689	1699
hu.63-B	1639	TCG-----GGAAAAACTAATGTGGACATTGAA	1639	1649	1659	1669	1679	1689	1699
hu.56-B	1639	TCA-----GAGAAAACAAATGTGGACATTGAA	1639	1649	1659	1669	1679	1689	1699
hu.45-B	1639	TCA-----GAGAAAACAAATGTGGACATTGAA	1639	1649	1659	1669	1679	1689	1699
hu.57-B	1636	TCA-----GAGAAAACAAATGTGGACATTGAA	1636	1646	1656	1666	1676	1686	1696

FIG. 3B

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hu.35-B TCA-----GAGAAAACAAATGTGGACATTGAA---AAGGTCATGATTACAGACGAAGAGGAAATCAGGA
 hu.58-B TCA-----GAGAAAACAAATGTGGACATTGAA---AAGGTCATGATTACAGACGAAGAGGAAATCAGGA
 hu.28-B TCA-----GAGAAAACAAATGTGGATATTGAA---AAGGTCATGATTACAGACGAAGAGGAAATCAGGA
 hu.51-B TCA-----GAGAAAACAAATGTGGACATTGAA---AAGGTCATGATTACAGACGAAGAGGAAATCAGGA
 hu.19-B TCG-----GGAAAACTAATGTGGACATTGAA---AAGGTCATGATTACAGACGAAGAGGAAATCAGGA
 hu.49-B TCA-----GAGAAAACAAATGTGGACATTGAA---AAGGTCATGATTACAGACGAAGAGGAAATCAGGA
 hu.52-B TCA-----GAGAAAACAAATGTGGACATTGAA---AAGGTCATGATTACAGACGAAGAGGAAATCAGGA
 hu.13-B TCA-----GAGAAAACAAATGTGGACATTGAA---AAGGTCATGATTACAGACGAAGAGGAAATCAGGA
 AAV2-B TCA-----GAGAAAACAAATGTGGACATTGAA---AAGGTCATGATTACAGACGAAGAGGAAATCAGGA
 hu.20-B TCG-----GGAAAACTAATGTGGACATTGAA---AAGGTCATGATTACAGACGAAGAGGAAATCAGGA
 hu.24-B TCG-----GGAAAACTAATGTGGACATTGAA---AAGGTCATGATTACAGACGAAGAGGAAATCAGGA
 hu.64-B TCG-----GGAAAACTAATGTGGACATTGAA---AAGGTCATGATTACAGACGAAGAGGAAATCAGGA
 hu.27-B TCG-----GGAAAACTAATGTGGACATTGAA---AAGGTCATGATTACAGACGAAGAGGAAATCAGGA
 hu.21-B TCG-----GGAAAACTAATGTGGACATTGAA---AAGGTCATGATTACAGACGAAGAGGAAATCAGGA
 hu.22-B TCG-----GGAAAACTAATGTGGACATTGAA---AAGGTCATGATTACAGACGAAGAGGAAATCAGGA
 hu.23-B TCG-----GGAAAACTAATGTGGACATTGAA---AAGGTCATGATTACAGACGAAGAGGAAATCAGGA
 hu.7-C ACA-----AATGCTAACGACGCGGATTGGAC---AATGTCTATGATTACAGATGAAGAAGAAATCCGCA
 hu.61-C ACA-----AATGCCAACGACGCGGATTGGAA---AATGTCTATGATTACAGATGAAGAAGAAATCAGGA
 rh.56-C ACA-----AATGCTAACGACGCGGATTGGAC---AATGTCTATGATTACAGATGAAGAAGAAATCCGCA
 hu.9-C ACA-----AATGCTAACGACGCGGATTGGAG---CATGTTATGATTACAGATGAAGAAGAAATCAGGA
 hu.54-C ACA-----AATGCTACCAACGCGGAATTGGAA---AATGTCTATGATTACAGATGAAGAAGAAATCAGGA
 hu.53-C ACA-----AATGCTACCAACGCGGAATTGGAA---AATGTCTATGATTACAGATGAAGAAGAAATCAGGA
 hu.60-C ACA-----AATGCCAACGACGCGGATTGGAA---AATGTCTATGATTACAGATGAAGAAGAAATCAGGA
 hu.55-C ACA-----AATGCTACCAACGCGGAATTGGAA---AATGTCTATGATTACAGATGAAGAAGAAATCAGGA
 hu.2-C ACA-----AATGCCAACGACGCGGATTGGAA---AATGTCTATGATTACAGATGAAGAAGAAATCAGGG
 hu.1-C ACA-----AATGCCAACGACGCGGATTGGAA---AATGTCTATGATTACAGATGAAGAAGAAATCAGGG
 hu.18-C ACA-----AATGCTAACGACGCGGATTGGAC---AATGTCTATGATTACAGATGAAGAAGAAATCCGCA
 hu.3-C ACA-----AATGCCAACGACGCGGATTGGAA---AATGTCTATGATTACAGATGAAGAAGAAATCAGGC
 hu.25-C ACA-----AATGCCAACGACGCGGATTGGAA---AATGTCTATGATTACAGATGAAGAAGAAATCAGGA
 hu.15-C ACA-----AATGCTAACGACGCGGATTGGAC---AATGTCTATGATTACAGATGAAGAAGAAATCCGCA

FIG. 3BP

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hu.16-C 1639 ACA-----AATGCTAACGACGCGGATTTGGAC---AATGTCATGATTACAGATGAAGAAGAAATCCGCA
 hu.11-C 1639 ACA-----AATGCTAACGACGCGGATTTGGAG---CATGTTATGATTACAGATGAAGAAGAAATCAGGA
 hu.10-C 1639 ACA-----AATGCTAACGACGCGGATTTGGAG---CATGTTATGATTACAGATGAAGAAGAAATCAGGA
 hu.4-C 1639 ACA-----AATGCCAACGACGCGGATTTGGAA---AATGTCATGATTACAGATGAAGAAGAAATCAGGG
 rh.54-D 1648 GCA-----ACCAAC---AAGACTACACTTGGAA---AACGTGTTAATGACAAATGAAGAAGAAATTCGTC
 rh.48-D 1648 GCA-----GCTAAT---AAGACTACACTGGAA---AATGTGTTAATGACAAATGAAGAGGAAATTCGTC
 rh.55-D 1648 GCA-----GCTAAT---AAGACTACACTGGAA---AATGTGTTAATGACAAATGAAGAGGAAATTCGTC
 rh.62-D 1648 GCA-----GCTAAT---AAGACTACACTGGAA---AATGTGTTAATGACAAATGAAGAGGAAATTCGTC
 AAV7-D 1648 GCA-----ACTAAC---AAAACACTATTGGAA---AATGTGTTAATGACAAATGAAGAAGAAATTCGTC
 rh.52-E 1648 GCT-----GGAAAAGACAACGTGGACTATAGC---AACGTGATGCTAACCCAGCGAGGAAGAAATCAAGA
 rh.51-E 1648 GCT-----GGAAAAGACAACGTGGACTATAGC---AACGTGATGCTAACCCAGCGAGGAAGAAATCAAGA
 hu.39-E 1648 GCT-----GGAAAAGACAACGTGGACTATAGC---AACGTGATGCTAACCCAGCGAGGAAGAAATCAAGA
 rh.53-E 1648 GCT-----GGAAAAGACAACGTGGACTATAGC---AACGTGATGCTAACCCAGCGAGGAAGAAATCAAGA
 hu.37-E 1648 GCT-----GGAAAGAGACAATGTGGACTACAGC---AGCGTTATGCTAACCCAGCGAGGAAGAAATTAATA
 rh.43-E 1642 GCT-----GCCAGAGACAATGCCGATTACAGC---GATGTCATGCTCACCAGCGAGGAAGAAATCAAAA
 rh.50-E 1648 GCT-----GGAAAAGACAACGTGGACTATAGC---AACGTGATGCTAACCCAGCGAGGAAGAAATCAAGA
 rh.49-E 1648 GCT-----GGAAAAGACAACATGGGCTATAGC---AACGTGATGCTAACCCAGCGAGGAAGAAATCAAGA
 rh.61-E 1648 GCT-----GGAAAAGACAACGTGGACTATAGC---AACGTGATGCTAACCCAGCGAGGAAGAAATCAAGA
 hu.41-E 1648 GCT-----GGAAAGAGACAATGTGGACTACAGC---AGCGTTATGCTAACCCAGCGAGGAAGAAATTAATA
 rh.64-E 1648 GCT-----GGAAAAGACAACGTGGACTATAGC---AACGTGATGCTAACCCAGCGAGGAAGAAATCAAGA
 hu.42-E 1648 GCT-----GGAAAGAGACAATGTGGACTACAGC---AGCGTTATGCTAACCCAGCGAGGAAGAAATTAATA
 rh.57-E 1648 GCT-----GGAAAAGACAACGTGGACTATAGC---AACGTGATGCTAACCCAGCGAGGAAGAAATCAAGA
 hu.40-E 1648 GCT-----GGAAAGAGACAATGTGGACTACAGC---AGCGTTATGCTAACCCAGCGAGGAAGAAATTAATA
 AAV8-E 1648 GCT-----GCCAGAGACAATGCCGATTACAGC---GATGTCATGCTCACCAGCGAGGAAGAAATCAAAA
 rh.58-E 1648 GCT-----GGAAAAGACAACGTGGACTATAGC---AACGTGATGCTAACCCAGCGAGGAAGAAATCAAGA
 rh.40-E 1648 GCT-----GGAAAGAGACAATGTGGACTATAGC---AGCGTTATGCTAACCCAGCGAGGAAGAAATTAATA
 hu.67-E 1648 GCT-----GGAAAGAGACAATGTGGACTACAGC---AGCGTTATGCTAACCCAGCGAGGAAGAAATTAATA
 hu.17-E 1648 GCT-----GGAAAAGACAACGTGGACTATAGC---AGCGTTATGCTAACCCAGGTGAGGAAGAAATCAAAA
 hu.6-E 1648 GCT-----GGAAAAGACAACGTGGACTATAGC---AGCGTTATGCTAACCCAGGTGAGGAAGAAATCAAAA
 hu.66-E 1648 GCT-----GGAAAGAGACAATGTGGACTACAGC---AGCGTTATGCTAACCCAGCGAGGAAGAAATTAATA

FIG. 3BQ

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rh. 38-E	1648	GCT-----GGAAGAGACAAATGTGGACTACAGC---AGCGTTATGTCTAACCAAGGAAAGAAATTAATA	1760	1770	1780	1790	1800	1810	1820
hu. 32-F	1642	ACT-----GGAAGAGACAAACGTGGATGCGGAC---AAAGTCATGATAACCAACGAAGAAATTAATA							
AAV9/hu	1642	ACT-----GGAAGAGACAAACGTGGATGCGGAC---AAAGTCATGATAACCAACGAAGAAATTAATA							
hu. 31-F	1642	ACT-----GGAAGAGACAAACGTGGATGCGGAC---AAAGTCATGATAACCAACGAAGAAATTAATA							
AAV5	1670	CGGTGAACCGCGTGGCGTACAACGTCGGCGGGCAGATGGCCACCAACCAACAGAGCTCCACCACTGCCCC						
AAV3-3	1703	CCACCAATCCTGTGGCAACAGAGCAGTATGGAACCTGTGGCAATAAATTGCAGAGCTCAAAATACAGCTCC							
AAV4-4	1697	CCACCAACGCCACCGATACGGACATGTGGGGCAACCTACCTGGCGGTGACCAAGAGCAACAGCAACCTGCC							
AAV1-A	1703	CCACTAACCCCTGTGGCCACCGAAAGATTTGGGACCGTGGCAGTCAATTTCCAGAGCAGCAGCAGACCC							
hu. 46-A	1703	CCACTAACCCCTGTGGCCACCGAAAGATTTGGGACCGTGGCAGTCAATTTCCAGAGCAGCAGCAGACCC							
hu. 48-A	1703	CCACTAACCCCTGTGGCCACCGAAAGATTTGGGACCGTGGCAGTCAATTTCCAGAGCAGCAGCAGACCC							
hu. 44-A	1703	CCACTAACCCCTGTGGCCACCGAAAGATTTGGGACCGTGGCAGTCAATTTCCAGAGCAGCAGCAGACCC							
hu. 43-A	1706	CCACTAACCCCTGTGGCCACCGAAAGATTTGGGACCGTGGCAGTCAATTTCCAGAGCAGCAGCAGACCC							
AAV6-A	1703	CCACTAACCCCGTGGCCACCGAAAGATTTGGGACCTGTGGCAGTCAATCTCCAGAGCAGCAGCAGACCC							
hu. 34-B	1700	CAACCAATCCCGTGGCTACGGAGCAGTATGGTTCTGTATCTACCAACCTCCAGAGAGGCAACAGACAAGC							
hu. 47-B	1700	CAACCAATCCCGTGGCTACGGAGCAGTATGGTTCTGTATCTACCAACCTCCAGAGAGGCAACAGACAAGC							
hu. 29-B	1700	CCACCAATCCCGTGGCTACGGAGCAGTATGGTTCTGTATCTACCAACCTCCAGAGAGGCAACAGACAAGC							
hu. 63-B	1700	CCACCAATCCCGTGGCTACGGAGCAGTATGGTTCTGTATCTACCAACCTCCAGAGAGGCAACAGACAAGC							
hu. 56-B	1700	CCACCAATCCCGTGGCTACGGAGCAGTATGGTTCTGTATCTACCAACCTCCAGAGAGGCAACAGACAAGC							
hu. 45-B	1700	CAACCAATCCCGTGGCTACGGAGCAGTATGGTTCTGTATCTACCAACCTCCAGAGAGGCAACAGACAAGC							
hu. 57-B	1697	CCACCAATCCCGTGGCTACGGAGCAGTATGGTTCTGTATCTACCAACCTCCAGAGAGGCAACAGACAAGC							
hu. 35-B	1700	CAACCAATCCCGTGGCTACGGAGCAGTATGGTTCTGTATCTACCAACCTCCAGAGAGGCAACAGACAAGC							
hu. 58-B	1700	CCACCAATCCCGTGGCTACGGAGCAGTATGGTTCTGTATCTACCAACCTCCAGAGAGGCAACAGACAAGC							
hu. 28-B	1700	CCACCAATCCCGTGGCTACGGAGCAGTATGGTTCTGTATCTACCAACCTCCAGAGAGGCAACAGACAAGC							
hu. 51-B	1700	CAACCAATCCCGTGGCTACGGAGCAGTATGGTTCTGTATCTACCAACCTCCAGAGAGGCAACAGACAAGC							
hu. 19-B	1700	CCACCAATCCCGTGGCTACGGAGCAGTATGGTTCTGTATCTACCAACCTCCAGAGAGGCAACAGACAAGC							
hu. 49-B	1700	CCACCAATCCCGTGGCTACGGAGCAGTATGGTTCTGTATCTACCAACCTCCAGAGAGGCAACAGACAAGC							
hu. 52-B	1700	CAACCAATCCCGTGGCTACGGAGCAGTATGGTTCTGTATCTACCAACCTCCAGAGAGGCAACAGACAAGC							

FIG. 3BR

hu.13-B 1700 CCACCAATCCCGTGGCTACGGAGCAGTATGGTTCTGTATCTACCAACCTGCAGGGCGGCAACACACAAGC
 AAV2-B 1700 CAACCAATCCCGTGGCTACGGAGCAGTATGGTTCTGTATCTACCAACCTCCAGAGAGGCAACAGACAAGC
 hu.20-B 1700 CCACCAATCCCGTGGCTACGGAGCAGTATGGTTCTGTATCTACCAACCTCCAGAGCGGCAACACACAAGC
 hu.24-B 1700 CCACCAATCCCGTGGCTACGGAGCAGTATGGTTCTGTATCTACCAACCTCCAGAGCGGCAACACACAAGC
 hu.64-B 1700 CCACCAATCCCGTGGCTACGGAGCAGTATGGTTCTGTATCTACCAACCTCCAGAGCGGCAACACACAAGC
 hu.27-B 1700 CCACCAATCCCGGGCTACGGAGCAGTATGGTTCTGTATCTACCAACCTCCAGAGCGGCAACACACAAGC
 hu.21-B 1700 CCACCAATCCCGTGGCTACGGAGCAGTATGGTTCTGTATCTACCAACCTCCAGAGCGGCAACACACAAGC
 hu.22-B 1700 CCACCAATCCCGTGGCTACGGAGCAGTATGGTTCTGTATCTACCAACCTCCAGAGCGGCAACACACAAGC
 hu.23-B 1700 CCACCAATCCCGTGGCTACGGAGCAGTATGGTTCTGTATCTACCTACCTCCAGAGCGGCAACACACAAGC
 hu.7-C 1700 CCACCAATCCCGTGGCTACGGAGCAGTACGGATATGTGTCAAAATAATTGCAAAACTCAAATACTGGTCC
 hu.61-C 1700 CCACCAATCCCGTGGCTACGGAGCAGTACGGAACTGTATCAAAATAATTGCAAAACTCAAACACTGGTCC
 rh.56-C 1700 CCACCAATCCCGTGGCTACGGAGCAGTACGGATATGTGTCAAAATAATTGCAAAACTCAAATACTGGTCC
 hu.9-C 1700 CCACCAATCCCTGTGGCTACAGAGCAGTACGGAAACGTGTCAAAATAATTGCAAAACTCAAATACTGGTCC
 hu.54-C 1697 CCACCAATCCCGTGGCTACAGAGCAGTACGGATATGTGTCAAAATAATTGCAAAACTCAAATACTGGTCC
 hu.53-C 1697 CCACCAATCCCGTGGCTACAGAGCAGTACGGATATGTGTCAAAATAATTGCAAAACTCAAATACTGGTCC
 hu.60-C 1700 CCACCAATCCCGTGGCTACGGAGCAGTACGGAACTGTATCAAAATAATTGCAAAACTCAAACACTGGTCC
 hu.55-C 1697 CCACCAATCCCGTGGCTACAGAGCAGTACGGATATGTGTCAAAATAATTGCAAAACTCAAATACTGGTCC
 hu.2-C 1700 CCACCAATCCCGTGGCTACGGAGCAGTACGGACTGTGTCAAAATAATTGCAAAACTCAAACACTGGTCC
 hu.1-C 1700 CCACCAATCCCGTGGCTACGGAGCAGTACGGACTGTGTCAAAATAATTGCAAAACTCAAACACTGGTCC
 hu.18-C 1700 CCACCAATCCCGTGGCTACGGAGCAGTACGGATATGTGTCAAAATAATTGCAAAACTCAAATACTGGTCC
 hu.3-C 1703 CCACCAATCCCGTGGCTACGGAGCAGTACGGACTGTGTCAAAATAATTGCAAAACTCAAACACTGGTCC
 hu.25-C 1700 CCACCAATCCCGTGGCTACGGAGCAGTACGGACTGTGTCAAAATAATTGCAAAACTCAAACACTGGTCC
 hu.15-C 1700 CCACCAATCCCGTGGCTACGGAGCAGTACGGATATGTGTCAAAATAATTGCAAAACTCAAATACTGGTCC
 hu.16-C 1700 CCACCAATCCCGTGGCTACGGAGCAGTACGGATATGTGTCAAAATAATTGCAAAACTCAAATACTGGTCC
 hu.11-C 1700 CCACCAATCCCTGTGGCTACAGAGCAGTACGGAAACGTGTCAAAATAATTGCAAAACTCAAATACTGGTCC
 hu.10-C 1700 CCACCAATCCCTGTGGCTACAGAGCAGTACGGAAACGTGTCAAAATAATTGCAAAACTCAAATACTGGTCC
 hu.4-C 1700 CCACCAATCCCGTGGCTACGGAGCAGTACGGACTGTGTCAAAATAATTGCAAAACTCAAACACTGGTCC
 rh.54-D 1706 CTACTAATCCCTGTGGCCACAGAAGAATACGGGATAGTCAGCAGCAATTTACAAGCGGCAATACTGCAGC
 rh.48-D 1706 CTACCAACCCGGTAGCCACCCAGGAATACGGGACTGTTAGCAGCAACCTGCAGGCGGCTAACACTGCAGC
 rh.55-D 1706 CTACCAACCCGGTAGCCACCCAGGAATACGGGACTGTTAGCAGCAACCTGCAGGCGGCTAACACTGCAGC

FIG. 3BS

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rh. 62-D	1706	CTACCAACCCGGTAGCCACCGAGGAATACGGGACTGTTAGCAGCAACCTGCAGGGGGCTAACACTGCAGC	1830	1840	1850	1860	1870	1880	1890
AAV7-D	1706	CTACTAATCCTGTAGCCACGGAGAAATACGGGATAGTCAGCAGCAACTTACAAGCGGCTAATACTGCAGC							
rh. 52-E	1709	CCACCAACCCCGTGGCCACAGAACAGTATGGCGTGGTGGCTGATAACCTACAGCAGCAAAACACCGCTCC							
rh. 51-E	1709	CCACCAACCCCGTGGCCACAGAACAGTATGGCGTGGTGGCTGATAACCTACAGCAGCAAAACACCGCTCC							
hu. 39-E	1709	CCACCAACCCCGTGGCCACAGAACAGTATGGCGTGGTGGCTGATAACCTACAGCAGCAAAACACCGCTCC							
rh. 53-E	1709	CCACCAACCCCGTGGCCACAGAACAGTATGGCGTGGTGGCTGATAACCTACAGCAGCAAAACACCGCTCC							
hu. 37-E	1709	CCACTAAACCCCGTAGCCACAGAACAAATACGGTGTGGTGGCTGACAACTTGACGAAACCAATACAGGGCC							
rh. 43-E	1703	CCACTAAACCCCTGTGGCTACAGAGGAATACGGTATCGTGGCAGATAACTTGCAGCAGCAAAACACCGCTCC							
rh. 50-E	1709	CCACCAACCCCGTGGCCACAGAACAGTATGGCGTGGTGGCTGATAACCTACAGCAGCAAAACACCGCTCC							
rh. 49-E	1709	CCACCAACCCCGTGGCCACAGAACAGTATGGCGTGGTGGCTGATAACCTACAGCAGCAAAACACCGCTCC							
rh. 61-E	1709	CCACCAACCCCGTGGCCACAGAACAGTATGGCGTGGTGGCTGATAACCTACAGCAGCAAAACACCGCTCC							
hu. 41-E	1709	CCACTAAACCCCTGTAGCCACAGAACAAATACGGTGTGGTGGCTGACAACTTGACGAAACCAATACAGGGCC							
rh. 64-E	1709	CCACCAACCCCGTGGCCACAGAACAGTATGGCGTGGTGGCTGATAACCTACAGCAGCAAAACACCGCTCC							
hu. 42-E	1709	CCACTAAACCCCTGTAGCCACAGAACAAATACGGTGTGGTGGCTGACAACTTGACGAAACCAATACAGGGCC							
rh. 57-E	1709	CCACCAACCCCGTGGCCACAGAACAGTATGGCGTGGTGGCTGATAACCTACAGCAGCAAAACACCGCTCC							
hu. 40-E	1709	CCACTAAACCCCTGTAGCCACAGAACAAATACGGTGTGGTGGCTGACAACTTGACGAAACCAATACAGGGCC							
AAV8-E	1709	CCACTAAACCCCTGTGGCTACAGAGGAATACGGTATCGTGGCAGATAACTTGCAGCAGCAAAACACCGCTCC							
rh. 58-E	1709	CCACCAACCCCGTGGCCACAGAACAGTATGGCGTGGTGGCTGATAACCTACAGCAGCAAAACACCGCTCC							
rh. 40-E	1709	CCACTAAACCCCTGTAGCCACAGAACAAATACGGTGTGGTGGCTGACAACTTGACGAAACCAATACAGGGCC							
hu. 67-E	1709	CCACTAAACCCCTGTAGCCACAGAACAAATACGGTGTGGTGGCTGACAACTTGACGAAACCAATACAGGGCC							
hu. 17-E	1709	CCACCAACCCAGTGGCCACAGAACAGTACGGCGTGGTGGCCGATAACCTGCAACAGCAAAACGCCGCTCC							
hu. 6-E	1709	CCACCAACCCAGTGGCCACAGAACAGTACGGCGTGGTGGCCGATAACCTGCAACAGCAAAACGCCGCTCC							
hu. 66-E	1709	CCACTAAACCCCTGTAGCCACAGAACAAATACGGTGTGGTGGCTGACAACTTGACGAAACCAATACAGGGCC							
rh. 38-E	1709	CCACTAAACCCCTGTAGCCACAGAACAAATACGGTGTGGTGGCTGACAACTTGACGAAACCAATACAGGGCC							
hu. 32-F	1703	CTACTAACCCCGTAGCAACGGAGTCCTATGGACAAAGTGGCCACAAACCAACAGAGTCCCCAAGCACAGGC							
AAV9/hu	1703	CTACTAACCCCGTAGCAACGGAGTCCTATGGACAAAGTGGCCACAAACCAACAGAGTCCCCAAGCACAGGC							
hu. 31-F	1703	CTACTAACCCCGTAGCAACGGAGTCCTATGGACAAAGTGGCCACAAACCAACAGAGTCCCCAAGCACAGGC							

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FIG. 3BT

AAV5 1740 CGCGACCGGCACGTACAACCTCCAGGAAATCGTGCCCGGCAGCGTGTGGATGGAGAGGACGTGTACCTC
 AAV3-3 1773 CACGACTGGAACTGTCAATCATCAGGGGGCCCTTACCTGGCATGGTGTGGCAAGATCGTGACGTGTACCTT
 AAV4-4 1767 GACCGTGGACAGACTGACAGCCCTGGAGCCGTGCGCTGGAATGGTCTGGCAAAACAGAGACATTTACTAC
 AAV1-A 1773 TGGACCGGAGATGTGCATGCTATGGAGCATTAACCTGGCATGGTGTGGCAAGATAGAGACGTGTACCTG
 hu.46-A 1773 TGGACCGGAGATGTGCATGCTATGGAGCATTAACCTGGCATGGTGTGGCAAGATAGAGACGTGTACCTG
 hu.48-A 1773 TGGACCGGAGATGTGCATGCTATGGAGCATTAACCTGGCATGGTGTGGCAAGATAGAGACGTGTACCTG
 hu.44-A 1773 TGGACCGGAGATGTGCATGCTATGGAGCATTAACCTGGCATGGTGTGGCAAGATAGAGACGTGTACCTG
 hu.43-A 1776 TGGACCGGAGATGTGCATGCTATGGAGCATTAACCTGGCATGGTGTGGCAAGATAGAGACGTGTACCTG
 AAV6-A 1773 TGGACCGGAGATGTGCATGTTATGGAGCCCTTACCTGGAATGGTGTGGCAAGACAGAGACGTATACCTG
 hu.34-B 1770 AGTACCGCAGATGTCAACACACAAGGCGTTCTTCCAGGCATGGTCTGGCAGGACAGAGATGTGTACCTT
 hu.47-B 1770 AGTACCGCAGATGTCAACACACAAGGCGTTCTTCCAGGCATGGTCTGGCAGGACAGAGATGTGTACCTT
 hu.29-B 1770 AGTACCGCAGATGTCAACACACAAGGCGTTCTTCCAGGCATGGTCTGGCAGGACAGAGACGTGTACCTG
 hu.63-B 1770 AGTACCTCAGATGTCAACACACAAGGCGTTCTTCCAGGCATGGTCTGGCAGGACAGAGACGTGTACCTG
 hu.56-B 1770 AGTACCTCAGATGTCAACACACAAGGCGTTCTTCCAGGCATGGTCTGGCAGGACAGAGACGTGTACCTG
 hu.45-B 1770 AGTACCGCAGATGTCAACACACAAGGCGTTCTTCCAGGCATGGTCTGGCAGGACAGAGATGTGTACCTT
 hu.57-B 1767 AGTACCTCAGATGTCAACACACAAGGCGTTCTTCCAGGCATGGTCTGGCAGGACAGAGACGTGTACCTG
 hu.35-B 1770 AGTACCGCAGATGTCAACACACAAGGCGTTCTTCCAGGCATGGTCTGGCAGGACAGAGATGTGTACCTT
 hu.58-B 1770 ATCTACTGCAGATGTCAACACACAAGGCGTTCTTCCAGGCATGGTCTGGCAGGACAGAGACGTGTACCTG
 hu.28-B 1770 AGTACCGCAGATGTCAACACACAAGGCGTTCTTCCAGGCATGGTCTGGGCAAGACAGAGACGTGTACCTG
 hu.51-B 1770 AGTACCGCAGATGTCAACACACAAGGCGTTCTTCCAGGCATGGTCTGGCAGGACAGAGATGTGTACCTT
 hu.19-B 1770 AGTACCTCAGATGTCAACACACAAGGCGTTCTTCCAGGCATGGTCTGGCAGGACAGAGACGTGTACCTG
 hu.49-B 1770 AGTACTGCAGATGTCAACACACAAGGCGTTCTTCCAGGCATGGTCTGGCAGGACAGAGACGTGCACCTG
 hu.52-B 1770 AGTACCGCAGATGTCAACACACAAGGCGTTCTTCCAGGCATGGTCTGGCAGGACAGAGATGTGTACCTT
 hu.13-B 1770 AGTACCGCAGATGTCAACACACAAGGCGTTCTTCCAGGCATGGTCTGGCAGGACAGAGACGTGTACCTG
 AAV2-B 1770 AGTACCGCAGATGTCAACACACAAGGCGTTCTTCCAGGCATGGTCTGGCAGGACAGAGATGTGTACCTT
 hu.20-B 1770 AGTACCTCAGATGTCAACACACAAGGCGTTCTTCCAGGCATGGTCTGGCAGGACAGAGACGTGTACCTG
 hu.24-B 1770 AGTACCTCAGATGTCAACACACAAGGCGTTCTTCCAGGCATGGTCTGGCAGGACAGAGACGTGTACCTG
 hu.64-B 1770 AGTACCTCAGATGTCAACACACAAGGCGTTCTTCCAGGCATGGTCTGGCAGGACAGAGACGTGTACCTG
 hu.27-B 1770 AGTACCTCAGATGTCAACACACAAGGCGTTCTTCCAGGCATGGTCTGGCAGGACAGAGACGTGTACCTG
 hu.21-B 1770 AGTACCTCAGATGTCAACACACAAGGCGTTCTTCCAGGCATGGTCTGGCAGGACAGAGACGTGTACCTG

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hu. 22-B 1770 AGCTACCTCAGATGTCAACACACAAGGCGTTCTTCCAGGCATGGTCTGGCAGGACAGAGACGTGTACCTG
 hu. 23-B 1770 AGCTACCTCAGATGTCAACACACAAGGCGTTCTTCCAGGCATGGTCTGGCAGGACAGAGACGTGTACCTG
 hu. 7-C 1770 AACTACTGGAACCTGTAATCACCAGGAGCGTTACCTGGCATGGTGTGGCAGGATCGAGACGTGTACCTG
 hu. 61-C 1770 AACTACTGGAACCTGTAATCACCAGGAGCGTTACCTGGTATGGTGTGGCAGGATCGAGACGTGTACCTG
 rh. 56-C 1770 AACTACTGGAACCTGTAATCACCAGGAGCGTTACCTGGCATGGTGTGGCAGGATCGAGACGTGTACCTG
 hu. 9-C 1770 AACTACAGAAAATGTCAATCACCAGGAGCGTTACCTGGTATGGTGTGGCAGGATCGAGACGTGTACCTG
 hu. 54-C 1767 AAGTACTGAACTGTGAATCACCAGGAGCATTAACCTGGTATGGTGTGGCAGGATCGAGACGTGTACCTG
 hu. 53-C 1767 AAGTACTGAACTGTGAATCACCAGGAGCATTAACCTGGTATGGTGTGGCAGGATCGAGACGTGTACCTG
 hu. 60-C 1770 AACTACTGGAACCTGTAATCACCAGGAGCGTTACCTGGTATGGTGTGGCAGGATCGAGACGTGTACCTG
 hu. 55-C 1767 AAGTACTGAACTGTGAATCACCAGGAGCATTAACCTGGTATGGTGTGGCAGGATCGAGACGTGTACCTG
 hu. 2-C 1770 AACTACTGGAACCTGTCAATCGCCAAAGGAGCGTTACCTGGTATGGTGTGGCAGGATCGAGACGTGTACCTG
 hu. 1-C 1770 AACTACTGGAACCTGTCAATCACCAGGAGCGTTACCTGGTATGGTGTGGCAGGATCGAGACGTGTACCTG
 hu. 18-C 1770 AACTACTGGAACCTGTCAATCACCAGGAGCGTTACCTGGTATGGTGTGGCAGGATCGAGACGTGTACCTG
 hu. 3-C 1773 AACTACAGGAACCTGTCAATCACCAGGAGCGTTACCTGGTATGGTGTGGCAGGATCGAGACGTGTACCTG
 hu. 25-C 1770 AACTACTGGAACCTGTCAATCACCAGGAGCGTTACCTGGTATGGTGTGGCAGGATCGAGATGTGTACCTT
 hu. 15-C 1770 AACTACTGGAACCTGTCAATCACCAGGAGCGTTACCTGGTATGGTGTGGCAGGATCGAGACGTGTACCTG
 hu. 16-C 1770 AACTACTGGAACCTGTCAATCACCAGGAGCGTTACCTGGTATGGTGTGGCAGGATCGAGACGTGTACCTG
 hu. 11-C 1770 AACTACAGAAAATGTCAATCACCAGGAGCGTTACCTGGTATGGTGTGGCAGGATCGAGACGTGTACCTG
 hu. 10-C 1770 AACTACAGAAAATGTCAATCACCAGGAGCGTTACCTGGTATGGTGTGGCAGGATCGAGACGTGTACCTG
 hu. 4-C 1770 AACTACTGGAACCTGTCAATCACCAGGAGCGTTACCTGGTATGGTGTGGCAGGATCGAGACGTGTACCTG
 rh. 54-D 1776 CCAGACACAAGTTGTCAACAACCCAGGAGCGTTACCTGGCATGGTCTGGCAGAACCCGGACGTGTACCTG
 rh. 48-D 1776 CCAGACACAAGTTGTCAACAACCCAGGAGCGTTACCTGGTATGGTCTGGCAGAACCCGGACGTGTACCTG
 rh. 55-D 1776 CCAGACACAAGTTGTCAACAACCCAGGAGCGTTACCTGGTATGGTCTGGCAGAACCCGGACGTGTACCTG
 rh. 62-D 1776 CCAGACACAAGTTGTCAACAACCCAGGAGCGTTACCTGGTATGGTCTGGCAGAACCCGGACGTGTACCTG
 AAV7-D 1776 CCAGACACAAGTTGTCAACAACCCAGGAGCGTTACCTGGCATGGTCTGGCAGAACCCGGACGTGTACCTG
 rh. 52-E 1779 TATTGTGGGGCCGTCAACAGCCAGGAGCGTTACCTGGCATGGTCTGGCAGAACCCGGACGTGTACTTG
 rh. 51-E 1779 TATTGTGGGGCCGTCAACAGCCAGGAGCGTTACCTGGCATGGTCTGGCAGAACCCGGACGTGTACTTG
 hu. 39-E 1779 TACTGTGGGGCCGTCAACAGCCAGGAGCGTTACCTGGCATGGTCTGGCAGAACCCGGACGTGTACTTG
 rh. 53-E 1779 TATTGTGGGGCCGTCAACAGCCAGGAGCGTTACCTGGCATGGTCTGGCAGAACCCGGACGTGTACTTG
 hu. 37-E 1779 TATTGTGGAAAATGTCAACAGCCAGGAGCGTTACCTGGCATGGTCTGGCAGAACCCGGACGTGTACTTG

FIG. 3BV

rh. 43-E	1773	TCAAATTGGA	1900	1910	1920	1930	1940	1950	1960
rh. 50-E	1779	TATTGTGGG						
rh. 49-E	1779	TATTGTGGG	CCCTCAACAGCCAGGAGCCCTTACCTGGCATGGTCTGGCAGAACCGGACGTGTACCTG						
rh. 61-E	1779	TATTGTGGG	CCCTCAACAGCCAGGAGCCCTTACCTGGCATGGTCTGGCAGAACCGGACGTGTACCTG						
hu. 41-E	1779	TATTGTGGG	AAATGTCAACAGCCCAAGGAGCCCTTACCTGGCATGGTCTGGCAGAACCGGACGTGTACCTG						
rh. 64-E	1779	TATTGTGGG	CCCTCAACAGCCAGGAGCCCTTACCTGGCATGGTCTGGCAGAACCGGACGTGTACCTG						
hu. 42-E	1779	TATTGTGGG	AAATGTCAACAGCCCAAGGAGCCCTTACCTGGCATGGTCTGGCAGAACCGGACGTGTACCTG						
rh. 57-E	1779	TATTGTGGG	CCCTCAACAGCCAGGAGCCCTTACCTGGCATGGTCTGGCAGAACCGGACGTGTACCTG						
hu. 40-E	1779	TATTGTGGG	AAATGTCAACAGCCCAAGGAGCCCTTACCTGGCATGGTCTGGCAGAACCGGACGTGTACCTG						
AAV8-E	1779	TCAAATTGGA	ACTGTCAACAGCCAGGAGCCCTTACCTGGCATGGTCTGGCAGAACCGGACGTGTACCTG						
rh. 58-E	1779	TATTGTGGG	CCCTCAACAGCCAGGAGCCCTTACCTGGCATGGTCTGGCAGAACCGGACGTGTACCTG						
rh. 40-E	1779	TATTGTGGG	AAATGTCAACAGCCCAAGGAGCCCTTACCTGGCATGGTCTGGCAGAACCGGACGTGTACCTG						
hu. 67-E	1779	TATTGTGGG	AAATGTCAACAGCCCAAGGAGCCCTTACCTGGCATGGTCTGGCAGAACCGGACGTGTACCTG						
hu. 17-E	1779	TATTGTAGG	CCCTCAACAGTCAAGGAGCCCTTACCTGGCATGGTCTGGCAGAACCGGACGTGTACCTG						
hu. 6-E	1779	TATTGTAGG	CCCTCAACAGTCAAGGAGCCCTTACCTGGCATGGTCTGGCAGAACCGGACGTGTACCTG						
hu. 66-E	1779	TATTGTGGG	AAATGTCAACAGCCCAAGGAGCCCTTACCTGGCATGGTCTGGCAGAACCGGACGTGTACCTG						
rh. 38-E	1779	TATTGTGGG	AAATGTCAACAGCCCAAGGAGCCCTTACCTGGCATGGTCTGGCAGAACCGGACGTGTACCTG						
hu. 32-F	1773	GCAGACCGG	CTGGGTTCAAAACCAAGGAATACTTCCGGGTATGGTTTGGCAGGACAGAGATGTGTACCTG						
AAV9/hu	1773	GCAGACCGG	CTGGGTTCAAAACCAAGGAATACTTCCGGGTATGGTTTGGCAGGACAGAGATGTGTACCTG						
hu. 31-F	1773	GCAGACCGG	CTGGGTTCAAAACCAAGGAATACTTCCGGGTATGGTTTGGCAGGACAGAGATGTGTACCTG						
AAV5	1810	CAAGGACCC	ATCTGGGCCAAGATCCAGAGACGGGGCGCACTTTACCCCTCTCCGGCCATGGCGGAT						
AAV3-3	1843	CAAGGACCT	ATCTGGGCCAAGATTCCTCACACGGATGGACACTTTCATCCCTTCTCCTCTGATGGAGGCT						
AAV4-4	1837	CAGGTCCCA	TTTGGGCCAAGATTCCTCATACCGATGGACACTTTCACCCCTCACCGCTGATGGTGGGT						
AAV1-A	1843	CAGGTCCCA	TTTGGGCCAAGATTCCTCACACAGATGGACACTTTCACCCGTCTCCTCTTATGGCGGCT						
hu. 46-A	1843	CAGGTCCCA	TTTGGGCCAAGATTCCTCACACAGATGGACACTTTCACCCGTCTCCTCTTATGGCGGCT						
hu. 48-A	1843	CAGGTCCCA	TTTGGGCCAAGATTCCTCACACAGATGGACACTTTCACCCGTCTCCTCTTATGGCGGCT						
hu. 44-A	1843	CAGGTCCCA	TTTGGGCCAAGATTCCTCACACAGATGGACACTTTCACCCGTCTCCTCTTATGGCGGCT						

FIG. 3BW

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hu. 43-A 1846 CAGGGTCCCATTTGGGCCAAAATTCCCTCACACAGATGGACACTTTCAACCGTCTCCTTATGGGCGGCT
 AAV6-A 1843 CAGGGTCCATTTGGGCCAAAATTCCCTCACACGGATGGACACTTTCAACCGTCTCCTCTCATGGGCGGCT
 hu. 34-B 1840 CAGGGGCCCCATCTGGGCAAAAGATTCCACACACGACGGACATTTTCAACCCCTCTCCCTCATGGGTGGAT
 hu. 47-B 1840 CAGGGGCCCCATCTGGGCAAAAGATTCCACACACGACGGACATTTTCAACCCCTCTCCCTCATGGGTGGAT
 hu. 29-B 1840 CAGGGGCCATTTGGGCAAAAGATTCCACACACGACGGACATTTTCAACCCCTCTCCCTCATGGGCGGAT
 hu. 63-B 1840 CAGGGGCCCCATCTGGGCAAAAGATTCCACACACGACGGACATTTTCAACCCCTCTCCCTCATGGGCGGAT
 hu. 56-B 1840 CAGGGGCCCCATCTGGGCAAAAGATTCCACACACGACGGACATTTTCAACCCCTCTCCCTCATGGGCGGAT
 hu. 45-B 1840 CAGGGGCCCCATCTGGGCAAAAGATTCCACACACGACGGACATTTTCAACCCCTCTCCCTCATGGGTGGAT
 hu. 57-B 1837 CAGGGGCCCCATCTGGGCAAAAGATTCCACACACGACGGACATTTTCAACCCCTCTCCCTCATGGGCGGAT
 hu. 35-B 1840 CAGGGGCCCCATCTGGGCAAAAGATTCCACACACGACGGACATTTTCAACCCCTCTCCCTCATGGGTGGAT
 hu. 58-B 1840 CAGGGGCCATCTGGGCAAAAGATTCCGACACACGACGGACATTTTCAACCCCTCTCCCTCATGGGCGGAT
 hu. 28-B 1840 CAGGGGCCATCTGGGCAAAAGATTCCACACACGACGGACATTTTCAACCCCTCTCCCTCATGGGCGGAT
 hu. 51-B 1840 CAGGGGCCATCTGGGCAAAAGATTCCACACACGACGGACATTTTCAACCCCTCTCCCTCATGGGTGGAT
 hu. 19-B 1840 CAGGGGCCATCTGGGCAAAAGATTCCACACACGACGGACATTTTCAACCCCTCTCCCTCATGGGCGGAT
 hu. 49-B 1840 CAGGGGCCATCTGGGCAAAAGATTCCACACACGACGGACATTTTCAACCCCTCTCCCTCATGGGCGGAT
 hu. 52-B 1840 CAGGGGCCATCTGGGCAAAAGATTCCACACACGACGGACATTTTCAACCCCTCTCCCTCATGGGTGGAT
 hu. 13-B 1840 CAGGGGCCATCTGGGCAAAAGATTCCACACACGACGGACATTTTCAACCCCTCTCCCTCATGGGCGGAT
 AAV2-B 1840 CAGGGGCCATCTGGGCAAAAGATTCCACACACGACGGACATTTTCAACCCCTCTCCCTCATGGGTGGAT
 hu. 20-B 1840 CAGGGGCCATCTGGGCAAAAGATTCCACACACGACGGACATTTTCAACCCCTCTCCCTCATGGGCGGAT
 hu. 24-B 1840 CAGGGGCCATCTGGGCAAAAGATTCCACACACGACGGACATTTTCAACCCCTCTCCCTCATGGGCGGAT
 hu. 64-B 1840 CAGGGGCCATCTGGGCAAAAGATTCCACACACGACGGACATTTTCAACCCCTCTCCCTCATGGGCGGAT
 hu. 27-B 1840 CAGGGGCCATCTGGGCAAAAGATTCCACACACGACGGACATTTTCAACCCCTCTCCCTCATGGGCGGAT
 hu. 21-B 1840 CAGGGGCCATCTGGGCAAAAGATTCCACACACGACGGACATTTTCAACCCCTCTCCCTCATGGGCGGAT
 hu. 22-B 1840 CAGGGGCCATCTGGGCAAAAGATTCCACACACGACGGACATTTTCAACCCCTCTCCCTCATGGGCGGAT
 hu. 23-B 1840 CAGGGGCCATCTGGGCAAAAGATTCCACACACGACGGACATTTTCAACCCCTCTCCCTCATGGGCGGAT
 hu. 7-C 1840 CAGGGGCCATCTGGGCAAAAGATTCCACACACGACGGACATTTTCAACCCCTCTCCCTCATGGGAGGTT
 hu. 61-C 1840 CAGGGGCCATCTGGGCAAAAGATTCCACACACGACGGACATTTTCAACCCCTCTCCCTCATGGGAGGTT
 rh. 56-C 1840 CAGGGGCCATCTGGGCAAAAGATTCCACACACGACGGACATTTTCAACCCCTCTCCCTCATGGGAGGTT
 hu. 9-C 1840 CAGGGGCCATCTGGGCAAAAGATTCCACACACGACGGACATTTTCAACCCCTCTCCCTCATGGGAGGTT
 hu. 54-C 1837 CAGGGGCCATCTGGGCAAAAGATTCCACACGACGGACATTTTCAACCCCTCTCCCTCATGGGAGGTT

FIG. 3BX

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hu. 53-C 1837 CAGGGACCCATTGTTGGGCCAAGATTCCCTCACACCGATGGACACTTTTCATCCTTCTCCACTGATGGGAGGTT
 hu. 60-C 1840 CAGGGACCCATTGTTGGGCCAAGATTCCCTCACACCGATGGACACTTTTCATCCTTCTCCACTGATGGGAGGTT
 hu. 55-C 1837 CAGGGACCCATTGTTGGGCCAAGATTCCCTCACACCGATGGACACTTTTCATCCTTCTCCACTGATGGGAGGTT
 hu. 2-C 1840 CAGGGACCCATTGTTGGGCCAAGATTCCCTCACACCGATGGACACTTTTCATCCTTCTCCACTGATGGGAGGTT
 hu. 1-C 1840 CAGGGACCCATTGTTGGGCCAAGATTCCCTCACACCGATGGACACTTTTCATCCTTCTCCACTGACGGGAGGTT
 hu. 18-C 1840 CAGGGACCCATTGTTGGGCCAAGATTCCCTCACACCGACGGGCACTTTTCATCCTTCTCCACTAATGGGAGGTT
 hu. 3-C 1843 CAGGGACCCATTGTTGGGCCAAGATTCCCTCACACCGATGGACACTTTTCATCCTTCTCCACTGATGGGAGGTT
 hu. 25-C 1840 CAGGGACCCATTGTTGGGCCAAGATTCCCTCACACCGATGGACACTTTTCATCCTTCTCCACTGATGGGAGGTT
 hu. 15-C 1840 CAGGGACCCATTGTTGGGCCAAGATTCCCTCACACCGATGGACACTTTTCATCCTTCTCCACTTATGGGAGGTT
 hu. 16-C 1840 CAGGGACCCATTGTTGGGCCAAGATTCCCTCACACCGATGGACACTTTTCATCCTTCTCCACTTATGGGAGGTT
 hu. 11-C 1840 CAGGGACCCATTGTTGGGCCAAGATTCCCTCACACCGACGGACACTTTTCACCCCTTCTCCACTGATGGGAGGTT
 hu. 10-C 1840 CAGGGACCCATTGTTGGGCCAAGATTCCCTCACACCGACGGACACTTTTCACCCCTTCTCCACTGATGGGAGGTT
 hu. 4-C 1840 CAGGGACCCATTGTTGGGCCAAGATTCCCTCACACCGATGGACACTTTTCATCCTTCTCCACTGATGGGAGGTT
 rh. 54-D 1846 CAGGGTCCCATTGTTGGGCCAAGATTCCCTCACACAGACGGCAACTTTTCACCCGTCTCCGTGATGGCGGCT
 rh. 48-D 1846 CAGGGTCCCATTGTTGGGCCAAGATTCCCTCACACAGACGGCAACTTTTCACCCGTCTCCGTGATGGCGGCT
 rh. 55-D 1846 CAGGGTCCCATTGTTGGGCCAAGATTCCCTCACACAGACGGCAACTTTTCACCCGTCTCCGTGATGGCGGCT
 rh. 62-D 1846 CAGGGTCCCATTGTTGGGCCAAGATTCCCTCACACAGACGGCAACTTTTCACCCGTCTCCGTGATGGCGGCT
 AAV7-D 1846 CAGGGTCCCATTGTTGGGCCAAGATTCCCTCACACGGATGGCAACTTTTCACCCGTCTCCTTTGATGGCGGCT
 rh. 52-E 1849 CAGGGTCCCTATTGTTGGGCCAAGATTCCCTCACACAGATGGCAACTTTTCACCCGTCTCCTTTAATGGCGGCT
 rh. 51-E 1849 CAGGGTCCCTATTGTTGGGCCAAGATTCCCTCACACAGATGGCAACTTTTCACCCGTCTCCTTTAATGGCGGCT
 hu. 39-E 1849 CAGGGTCCCTATTGTTGGGCCAAGATTCCCTCACACAGATGGCAACTTTTCACCCGTCTCCTTTAATGGCGGCT
 rh. 53-E 1849 CAGGGTCCCTATTGTTGGGCCAAGATTCCCTCACACAGATGGCAACTTTTCACCCGTCTCCTTTAATGGCGGCT
 hu. 37-E 1849 CAGGGTCCCATTGTTGGGCCAAGATTCCCTCACACGGACGGCAACTTTTCACCCCTTCAACCGCTAATGGGAGGAT
 rh. 43-E 1843 CAGGGTCCCATTGTTGGGCCAAGATTCCCTCACACGGACGGCAACTTTTCACCCGTCTCCGTGATGGCGGCT
 rh. 50-E 1849 CAGGGTCCCTATTGTTGGGCCAAGATTCCCTCACACAGATGGCAACTTTTCACCCGTCTCCTTTAATGGCGGCT
 rh. 49-E 1849 CAGGGTCCCTATTGTTGGGCCAAGATTCCCTCACACAGATGGCAACTTTTCACCCGTCTCCTTTAATGGCGGCT
 rh. 61-E 1849 CAGGGTCCCTATTGTTGGGCCAAGATTCCCTCACACAGATGGCAACTTTTCACCCGTCTCCTTTAATGGCGGCT
 hu. 41-E 1849 CAGGGTCCCATTGTTGGGCCAAGATTCCCTCACACGGACGGCAACTTTTCACCCCTTCAACCGCTAATGGGAGGAT
 rh. 64-E 1849 CAGGGTCCCTATTGTTGGGCCAAGATTCCCTCACACAGATGGCAACTTTTCACCCGTCTCCTTTAATGGCGGCT
 hu. 42-E 1849 CAGGGTCCCATTGTTGGGCCAAGATTCCCTCACACGGACGGCAACTTTTCACCCCTTCAACCGCTAATGGGAGGAC

FIG. 3B4

rh. 57-E	1849	CAGGGTCCCTATTTGGGCCAAGATTCCCTCACACAGATGGCAACTTTCACCCGCTCTCCTTTAATGGGCGGCT	1970	1980	1990	2000	2010	2020	2030
hu. 40-E	1849	CAGGGTCCCATCTGGGCCAAGATTCCCTCACACGACGGCAACTTCCACCCCTTCACCCGCTAATGGGAGGAT						
AAV8-E	1849	CAGGGTCCCATCTGGGCCAAGATTCCCTCACACGACGGCAACTTCCACCCGCTCTCCGCTGATGGGCGGCT	1880	TCGGACTCAAAACACCCACCGCCCATGATGCTCATCAAGAACAACGCTGTGCCCCGGAAT--ATCACCAG					
rh. 58-E	1849	CAGGGTCCCTATTTGGGCCAAGATTCCCTCACACAGATGGCAACTTTCACCCGCTCTCCTTTAATGGGCGGCT	1913	TTGGACTGAAACATCCGCCTCCTCAAATCATGATCAAAATACTCCGGTACCGGCAAAATCCTCCGACGAC					
rh. 40-E	1849	CAGGGTCCCATCTGGGCCAATAATCCCTCACACGACGGCAATTTTCACCCGCTCTCCTCTGATGGGCGGCT	1907	TTGGGCTGAAACACCCCGCTCCTCAAATTTTATCAAGAACAACCCCGGTACCTGCGAATCCTGCAACGAC					
hu. 67-E	1849	CAGGGTCCCATCTGGGCCAAGATTCCCTCACACGACGGCAACTTCCACCCCTTCACCCGCTAATGGGAGGAT	1913	TTGGACTCAAGAACCCCGCTCCTCAGATCCTCATCAAAAACACGCTGTTCTCGGAATCCTCCGGCGGA					
hu. 17-E	1849	CAGGGTCCCTATCTGGGCCAAGATTCCCTCACACGACGGCAACTTTCATCCTTCGCCGCTGATGGGAGGCT	1913	TTGGACTCAAGAACCCCGCTCCTCAGATCCTCATCAAAAACACGCTGTTCTCGGAATCCTCCGGCGGA					
hu. 6-E	1849	CAGGGTCCCTATCTGGGCCAAGATTCCCTCACACGACGGCAACTTTCATCCTTCGCCGCTGATGGGAGGCT	1913	TTGGACTCAAGAACCCCGCTCCTCAGATCCTCATCAAAAACACGCTGTTCTCGGAATCCTCCGGCGGA					
hu. 66-E	1849	CAGGGTCCCATCTGGGCCAAGATTCCCTCACACGACGGCAACTTCCACCCCTTCACCCGCTAATGGGAGGAT	1913	TTGGACTCAAGAACCCCGCTCCTCAGATCCTCATCAAAAACACGCTGTTCTCGGAATCCTCCGGCGGA					
rh. 38-E	1849	CAGGGTCCCATCTGGGCCAAGATTCCCTCACACGACGGCAACTTCCACCCCTTCACCCGCTAATGGGAGGAT	1913	TTGGACTCAAGAACCCCGCTCCTCAGATCCTCATCAAAAACACGCTGTTCTCGGAATCCTCCGGCGGA					
hu. 32-F	1843	CAAGGACCCATTGGGCCAATAATCCCTCACACGACGGCAACTTTCACCCCTTCTCCGCTAATGGGAGGCT	1916	TTGGACTCAAGAACCCCGCTCCTCAGATCCTCATCAAAAACACGCTGTTCTCGGAATCCTCCGGCGGA					
AAV9/hu	1843	CAAGGACCCATTGGGCCAATAATCCCTCACACGACGGCAACTTTCACCCCTTCTCCGCTGATGGGAGGCT	1913	TTGGACTTAAGCACCCCGCTCCTCAGATCCTCATCAAAAACACGCTGTTCTCGGAATCCTCCGGCGGA					
hu. 31-F	1843	CAAGGACCCATTGGGCCAATAATCCCTCACACGACGGCAACTTTCACCCCTTCTCCGCTAATGGGAGGCT	1910	TCGGACTTAAACACCCCTCCTCCACAGATTCTCATCAAGAACAACCCCGGTACCTGCGAATCCTTCGACCCAC					
			1910	TCGGACTTAAACACCCCTCCTCCACAGATTCTCATCAAGAACAACCCCGGTACCTGCGAATCCTTCGACCCAC					
			1910	TCGGACTTAAACACCCCTCCTCCACAGATTCTCATCAAGAACAACCCCGGTACCTGCGAATCCTTCGACCCAC					
			1910	TCGGACTTAAACACCCCTCCTCCACAGATTCTCATCAAGAACAACCCCGGTACCTGCGAATCCTTCGACCCAC					
			1910	TCGGACTTAAACACCCCTCCCGCGCAGATTCTCATCAAGAACAACCCCGGTACCTGCGAATCCTTCGACTAC					
			1910	TTGGACTTAAACACCCCTCCTCCACAGATTCTCATTAAGAATAACCCCGGTACCTGCGAATCCTTCGACCCAC					

FIG. 3BZ

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hu. 45-B 1910 TCGGACTTAAACACCCCTCCTCCACAGATTCTCATCAAGAACAACACCCCGGTACCTGCGAATCCTTCGACCAC
 hu. 57-B 1907 TTGGACTTAAACACCCCTCCTCCACAGATTCTCATTAAGAATAACCCCGGTACCTGCGAATCCTTCGACCAC
 hu. 35-B 1910 TCGGACTTAAACACCCCTCCTCCACAGATTCTCATCAAGAACAACACCCCGGTACCTGCGAATCCTTCGACCAC
 hu. 58-B 1910 TCGGACTTAAACACCCCTCCTCCACAGATTCTCATCAAAAACAACCCCGGTACCTGCGAATCCTTCGACCAC
 hu. 28-B 1910 TTGGACTTAAACACCCCTCCTCCACAGATTCTCATCAAGAACAACACCCCGGTACCTGCGAATCCTTCGACCAC
 hu. 51-B 1910 TCGGACTTAAACACCCCTCCTCCACAGATTCTCATCAAGAACAACACCCCGGTACCTGCGAATCCTTCGACCAC
 hu. 19-B 1910 TCGGACTTAAACACCCCTCCTCCACAAATTCTCATCAAGAACAACACCCCGGTACCTGCGAATCCTTCGACCAC
 hu. 49-B 1910 TTGGACTTAAACACCCCTCCTCCACAGATTCTCATCAAGAACAACACCCCGGTACCTGCGAATCCTTCGACCAC
 hu. 52-B 1910 TCGGACCTAAACACCCCTCCTCCACAGATTCTCATCAAGAACAACACCCCGGTACCTGCGAATCCTTCGACCAC
 hu. 13-B 1910 TCGGACTTAAACACCCCTCCTCCACAGATTCTCATCAAGAACAACACCCCGGTACCTGCGAATCCTTCGACCAC
 AAV2-B 1910 TCGGACTTAAACACCCCTCCTCCACAGATTCTCATCAAGAACAACACCCCGGTACCTGCGAATCCTTCGACCAC
 hu. 20-B 1910 TCGGACTTAAACACCCCTCCTCCACAAATTCTCATCAAGAACAACACCCCGGTACCTGCGAATCCTTCGACCAC
 hu. 24-B 1910 TCGGACTTAAACACCCCTCCTCCACAAATTCTCATCAAGAACAACACCCCGGTACCTGCGAATCCTTCGACCAC
 hu. 64-B 1910 TCGGACTTAAACACCCCTCCTCCCGCAGATTCTCATCAAGAACAACACCCCGGTACCTGCGAATCCTTCGACTAC
 hu. 27-B 1910 TCGGACTTAAACACCCCTCCTCCACAAATTCTCATCAAGAACAACACCCCGGTACCTGCGAATCCTTCGACCAC
 hu. 21-B 1910 TCGGACTTAAACACCCCTCCTCCACAAATTCTCATCAAGAACAACACCCCGGTACCTGCGAATCCTTCGACCAC
 hu. 22-B 1910 TCGGACTTAAACACCCCTCCTCCACAAATTCTCATCAAGAACAACACCCCGGTACCTGCGAATCCTTCGACCAC
 hu. 23-B 1910 TTGGACTTAAACACCCCTCCTCCACAAATTCTCATCAAGAACAACACCCCGGTACCTGCGAATCCTTCGACCAC
 hu. 7-C 1910 TTGGGCTCAAACACCCCGCTCCTCAGATCATGATCAAAAACACTCCCGTTCCAGCCAAATCCTCCCACAAA
 hu. 61-C 1910 TTGGACTCAAACACCCACCTCCTCAAATCATGATCAAAAACACTCCCGTTCCAGCCAAATCCTCCCACAAA
 rh. 56-C 1910 TTGGGCTCAAACACCCCGCTCCTCAAATCATGATCAAAAACACTCCCGTTCCAGCCAAATCCTCCCACAAA
 hu. 9-C 1910 TTGGACTCAAACACCCCGCTCCTCAAATCATGATCAAAAACACTCCCGTTCCAGCCAAATCCTCCCACAAA
 hu. 54-C 1907 TTGGACTCAAACACCCCGCTCCTCAGATTATGATCAAAAACACTCCCGTTCCAGCCAAATCCTCCCACAAA
 hu. 53-C 1907 TTGGACTCAAACACCCCGCTCCTCAGATTATGATCAAAAACACTCCCGTTCCAGCCAAATCCTCCCACAAA
 hu. 60-C 1910 TTGGACTCAAACACCCACCTCCTCAAATCATGATCAAAAACACTCCCGTTCCAGCCAAATCCTCCCACAAA
 hu. 55-C 1907 TTGGACTCAAACACCCCGCTCCTCAGATTATGATCAAAAACACTCCCGTTCCAGCCAAATCCTCCCACAAA
 hu. 2-C 1910 TTGGACTCAAACACCCCGCTCCTCAGATCATGATCAAAAACACTCCCGTTCCAGCCAAATCCTCCCACAAA
 hu. 1-C 1910 TTGGACTCAAACACCCCGCTCCTCAGATCATGATCAAAAACACTCCCGTTCCAGCCAAATCCTCCCACAAA
 hu. 18-C 1910 TTGGGCTCAAACACCCCGCTCCTCAGATCATGATCAAAAACACTCCCGTTCCAGCCAAATCCTCCTACAAA
 hu. 3-C 1913 TTGGACTCAAACACCCCGCTCCTCAGATCATGATCAAAAAGCACTCCCGTTCCAGCCAAATCCTCCCACAAA

FIG. 3CA

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hu.25-C 1910 TTGGACTCAAACACCCGCCCTCCTCAGATTATGATCAAAAACACTCCCGTTCCAGCCAAATCCTCCTACAAA
 hu.15-C 1910 TTGGACTCAAACACCCACCTCCTCAGATCATGATTAAAAACACTCCCGTTCCAGCCAAATCCTCCTACAAA
 hu.16-C 1910 TTGGACTCAAACACCCACCTCCTCAGATCATGATTAAAAACACTCCCGTTCCAGCCAAATCCTCCTACAAA
 hu.11-C 1910 TTGGACTCAAACACCCGCCCTCCTCAATCATGATCAAAAACACTCCCGTTCCAGCCAAATCCTCCTACAAA
 hu.10-C 1910 TTGGACTCAAACACCCGCCCTCCTCAATCATGATCAAAAACACTCCCGTTCCAGCCAAATCCTCCTACAAA
 hu.4-C 1910 TTGGACTCAAACACCCGCCCTCCTCAGATCATGATCAAAAACACTCCCGTTCCAGCCAAATCCTCCTACAAA
 rh.54-D 1916 TTGGACTGAAGCATCCGCCCTCCTCAGATCCTGATCAAAAACACTCCTGTTCTGCTAATCCCCGGAGGT
 rh.48-D 1916 TTGGACTGAAGCATCCGCCCTCCTCAGATCCTGATCAAAAACACTCCTGTTCTGCTAATCCCCGGAGGT
 rh.55-D 1916 TTGGACTGAAGCATCCGCCCTCCTCAGATCCTGATCAAAAACACTCCTGTTCTGCTAATCCCCGGAGGT
 rh.62-D 1916 TTGGACTGAAGCATCCGCCCTCCTCAGATCCTGATCAAAAACACTCCTGTTCTGCTAATCCCCGGAGGT
 AAV7-D 1916 TTGGACTTAAACATCCGCCCTCCTCAGATCCTGATCAAGAACACTCCCGTTCCCGCTAATCCTCCGGAGGT
 rh.52-E 1919 TTGGACTTAAACATCCGCCCTCCTCAGATCCTCATCAAAAACACTCCTGTTCTGCGGATCCTCCAACAGC
 rh.51-E 1919 TTGGACTTAAACATCCGCCCTCCTCAGATCCTCATCAAAAACACTCCTGTTCTGCGGATCCTCCAACAGC
 hu.39-E 1919 TTGGACTTAAACATCCGCCCTCCTCAGATCCTCATCAAAAACACTCCTGTTCTGCGGATCCTCCAACAGC
 rh.53-E 1919 TTGGACTTAAACATCCGCCCTCCTCAGATCCTCATCAAAAACACTCCTGTTCTGCGGATCCTCCAACAGC
 hu.37-E 1919 TTGGACTGAAGCACCACCTCCTCAGATCCTGATCAAGAACACGCCGGTACCTGCGGATCCTCCAACAAC
 rh.43-E 1913 TTGGCCTGAAACATCCTCCGCCCTCAGATCCTGATCAAGAACACGCCCTGTACCTGCGGATCCTCCGACCAAC
 rh.50-E 1919 TTGGACTTAAACATCCGCCCTCCTCAGATCCTCATCAAAAACACTCCTGTTCTGCGGATCCTCCAACAGC
 rh.49-E 1919 TTGGACTTAAACATCCGCCCTCCTCAGATCCTCATCAAAAACACTCCTGTTCTGCGGATCCTCCAACAGC
 rh.61-E 1919 TTGGACTTAAACATCCGCCCTCCTCAGGTCTCATCAAAAACACTCCTGTTCTGCGGATCCTCCAACAGC
 hu.41-E 1919 TTGGACTGAAGCACCACCTCCTCAGATCCTGATCAAGAACACGCCGGTACCTGCGGATCCTCCAACAAC
 rh.64-E 1919 TTGGACTTAAACATCCGCCCTCCTCAGATCCTCATCAAAAACACTCCTGTTCTGCGGATCCTCCAACAGC
 hu.42-E 1919 TTGGACTGAAGCACCACCTCCTCAGATCCTGATCAAGAACACGCCGGTACCTGCGGATCCTCCAACAAC
 rh.57-E 1919 TTGGACTTAAACATCCGCCCTCCTCAGATCCTCATCAAAAACACTCCTGTTCTGCGGATCCTCCAACAGC
 hu.40-E 1919 TTGGACTGAAGCACCACCTCCTCAGATCCTGATCAAGAACACGCCGGTACCTGCGGATCCTCCAACAAC
 AAV8-E 1919 TTGGCCTGAAACATCCTCCGCCCTCAGATCCTGATCAAGAACACGCCCTGTACCTGCGGATCCTCCGACCAAC
 rh.58-E 1919 TTGGACTTAAACATCCGCCCTCCTCAGATCCTCATCAAAAACACTCCTGTTCTGCGGATCCTCCAACAGC
 rh.40-E 1919 TTGGACTGAAGCACCACCTCCTCAGATCCTGATCAAGAAATACGCCGGTACCTGCGGATCCTCCAACAGC
 hu.67-E 1919 TTGGACTGAAGCACCACCTCCTCAGATCCTGATCAAGAACACGCCGGTACCTGCGGATCCTCCAACAGC
 hu.17-E 1919 TTGGACTGAAACACCCGCCCTCCTCAGATCCTGATTAAGAAATACACCTGTTCCCGGGATCCTCCAACACTAC

FIG. 3CB

hu. 6-E	1919	TTGGACTGAAACACCCGCCCTCCTCAGATCCTGATTAAAGAATACACCTGTTCCCGGGGATCCTCCAACCTAC	2040	2050	2060	2070	2080	2090	2100
hu. 66-E	1919	TTGGACTGAAGCACCCACCTCCTCAGATCCTGATCAAGAACAACGCCGGTACCTGCGGATCCTCCAACAAC							
rh. 38-E	1919	TTGGACTGAAGCACCCACCTCCTCAGATCCTGATCAAGAACAACGCCGGTACCTGCGGATCCTCCAACAAC							
hu. 32-F	1913	TTGGAATGAAGCACCCGCCCTCCTCAGATCCTCATCAAAAACACACCTGTACCTGCGGATCCTCCAACGGC							
AAV9/hu	1913	TTGGAATGAAGCACCCGCCCTCCTCAGATCCTCATCAAAAACACACCTGTACCTGCGGATCCTCCAACGGC							
hu. 31-F	1913	TTGGAATGAAGCACCCGCCCTCCTCAGATCCTCATCAAAAACACACCTGTACCTGCGGATCCTCCAACGGC							
AAV5	1947	CTTCTCGGACGTGCCCCGTGAGCAGCTTCATCACCCAGTACAGCACCCGGGCAGGTCAACCGTGGAGATGGAG						
AAV3-3	1983	TTTCAGCCCCGGCCAAGTTTGCTTCATTTATCACTCAGTACTCCACTGGACAGGTCAAGCGTGGAAATTGAG							
AAV4-4	1977	CTTCAGCTCTACTCCGGTAACTCCTTCATTACTCAGTACAGCACTGGCCAGGTGTCGGTGCAGATTGAC							
AAV1-A	1983	GTTTTCAGCTACAAAGTTTGCTTCATTATCACCCCAATACTCCGACAGGACAAGTGAGTGTGGAAATTGAA							
hu. 46-A	1983	GTTTTCAGCTACAAAGTTTGCTTCATTATCACCCCAATACTCCGACAGGACAAGTGAGTGTGGAAATTGAA							
hu. 48-A	1983	GTTTTCAGCTACAAAGTTTGCTTCATTATCACCCCAATACTCCGACAGGACAAGTGAGTGTGGAAATTGAA							
hu. 44-A	1983	GTTTTCAGCTACAAAGTTTGCTTCATTATCACCCCAATACTCCGACAGGACAAGTGAGTGTGGAAATTGAA							
hu. 43-A	1986	GTTTTCAGCTACAAAGTTTGCTTCATTATCACCCCAATACTCCGACAGGACAAGTGAGTGTGGAAATTGAA							
AAV6-A	1983	GTTTTCGGCTACAAAGTTTGCTTCATTATCACCCAGTATTCACACAGGACAAGTGAGCGTGGAGATTGAA							
hu. 34-B	1980	CTTCAGTGCGGCAAGTTTGCTTCCTTCATCACACAGTACTCCACGGGACAGGTCAAGCGTGGAGATCGAG							
hu. 47-B	1980	CTTCAGTGCGGCAAGTTTGCTTCCTTCATCACACAGTACTCCACGGGACAGGTCAAGCGTGGAGATCGAG							
hu. 29-B	1980	CTTCAGTGCGGCAAGTTTGCTTCCTTCATCACACAGTACTCCACGGGACAGGTCAAGCGTGGAGATCGAG							
hu. 63-B	1980	CTTCAGTGCGGCAAGTTTGCTTCCTTCATCACACAGTACTCCACGGGACAGGTCAAGCGTGGAGATCGAG							
hu. 56-B	1980	CTTCAGCGGGCAAGTTTGCTTCCTTCATCACACAGTATTCACGGGGCAGGTCAAGCGTGGAGATCGAG							
hu. 45-B	1980	CTTCAGTGCGGCAAGTTTGCTTCCTTCATCACACAGTACTCCACGGGACAGGTCAAGCGTGGAGATCGAG							
hu. 57-B	1977	CTTCAGCGGGCAAGTTTGCTTCCTTCATCACACAGTATTCACGGGGCAGGTCAAGCGTGGAGATCGAG							
hu. 35-B	1980	CTTCAGTGCGGCAAGTTTGCTTCCTTCATCACACAGTACTCCACGGGACAGGTCAAGCGTGGAGATCGAG							
hu. 58-B	1980	CTTCAGTGCGGCAAGTTTGCTTCCTTCATCACACAGTATTCACGGGGCAGGTCAAGCGTGGAGATCGAG							
hu. 28-B	1980	CTTCAGTGCGGCAAGTTTGCTTCCTTCATCACACAGTACTCCACGGGGCAGGTCAAGCGTGGAGATCGAG							
hu. 51-B	1980	CTTCAGTGCGGCAAGTTTGCTTCCTTCATCACACAGTACTCCACGGGGCAGGTCAAGCGTGGAGATCGAG							
hu. 19-B	1980	TTTCAGTGCGGCAAGTTTGCTTCCTTCATCACACAGTACTCCACGGGGCAGGTCAAGCGTGGAGATCGAG							

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hu.49-B 1980 CTTCAGTGGGCAAAGTTTGCTTCTTCATCACACAGTATTCCACAGGGCAGGTGAGCGTGGAGATCGAG
 hu.52-B 1980 CTTCAGTGGGCAAAGTTTGCTTCTTCATCACACAGTACTCCACGGGACAGGTGAGCGTGGAGATCGAG
 hu.13-B 1980 CTTCAGTGGGCAAAGTTTGCTTCTTCATCACACAGTATTCCACGGGGCAGGTGAGCGTGGAGATCGAG
 AAV2-B 1980 CTTCAGTGGGCAAAGTTTGCTTCTTCATCACACAGTACTCCACGGGACAGGTGAGCGTGGAGATCGAG
 hu.20-B 1980 TTTTCAGTGGGCAAAGTTTGCTTCTTCATCACACAGTACTCCACGGGGCAGGTGAGCGTGGAGATCGAG
 hu.24-B 1980 TTTTCAGTGGGCAAAGTTTGCTTCTTCATCACACAGTACTCCACGGGGCAGGTGAGCGTGGAGATCGAG
 hu.64-B 1980 CTTTCAGTGGGCAAAGTTTGCTTCTTCATCACACAGTACTCCACGGGGCAGGTGAGCGTGGAGATCGAG
 hu.27-B 1980 TTTTCAGTGGGCAAAGTTTGCTTCTTCATCACACAGTACTCCACGGGGCAGGTGAGCGTGGAGATCGAG
 hu.21-B 1980 TTTTCAGTGGGCAAAGTTTGCTTCTTCATCACACAGTACTCCACGGGGCAGGTGAGCGTGGAGATCGAG
 hu.22-B 1980 TTTTCAGTGGGCAAAGTTTGCTTCTTCATCACACAGTACTCCACGGGGCAGGTGAGCGTGGAGATCGAG
 hu.23-B 1980 TTTTCAGTGGGCAAAGTTTGCTTCTTCATCACACAGTACTCCACGGGGCAGGTGAGCGTGGAGATCGAG
 hu.7-C 1980 CTTTCAGTTCTGCCAAGTTTGCTTCTTCATCACACAGTATTCCACGGGGCAGGTGAGCGTGGAGATCGAG
 hu.61-C 1980 CTTTCAGTTCTGCCAAGTTTGCTTCTTCATCACACAGTATTCCACGGGGCAGGTGAGCGTGGAGATCGAG
 rh.56-C 1980 CTTTCAGTTCTGCCAAGTTTGCTTCTTCATCACACAGTATTCCACGGGGCAGGTGAGCGTGGAGATCGAG
 hu.9-C 1980 CTTTCAGTTCTGCCAAGTTTGCTTCTTCATCACACAGTATTCCACGGGGCAGGTGAGCGTGGAGATCGAG
 hu.54-C 1977 CTTTCAGTTCTGCCAAGTTTGCTTCTTCATCACACAGTATTCCACGGGGCAGGTGAGCGTGGAGATCGAG
 hu.53-C 1977 CTTTCAGTTCTGCCAAGTTTGCTTCTTCATCACACAGTATTCCACGGGGCAGGTGAGCGTGGAGATCGAG
 hu.60-C 1980 CTTTCAGTTCTGCCAAGTTTGCTTCTTCATCACACAGTATTCCACGGGGCAGGTGAGCGTGGAGATCGAG
 hu.55-C 1977 CTTTCAGTTCTGCCAAGTTTGCTTCTTCATCACACAGTATTCCACGGGGCAGGTGAGCGTGGAGATCGAG
 hu.2-C 1980 CTTTCAGTTCTGCCAAGTTTGCTTCTTCATCACACAGTATTCCACGGGGCAGGTGAGCGTGGAGATCGAG
 hu.1-C 1980 CTTTCAGTTCTGCCAAGTTTGCTTCTTCATCACACAGTATTCCACGGGGCAGGTGAGCGTGGAGATCGAG
 hu.18-C 1980 CTTTCAGTTCTGCCAAGTTTGCTTCTTCATCACACAGTATTCCACGGGGCAGGTGAGCGTGGAGATCGAG
 hu.3-C 1983 CTTTCAGTTCTGCCAAGTTTGCTTCTTCATCACACAGTATTCCACGGGGCAGGTGAGCGTGGAGATCGAG
 hu.25-C 1980 CTTTCAGTTCTGCCAAGTTTGCTTCTTCATCACACAGTATTCCACGGGGCAGGTGAGCGTGGAGATCGAG
 hu.15-C 1980 CTTTCAGTTCTGCCAAGTTTGCTTCTTCATCACACAGTATTCCACGGGGCAGGTGAGCGTGGAGATCGAG
 hu.16-C 1980 CTTTCAGTTCTGCCAAGTTTGCTTCTTCATCACACAGTATTCCACGGGGCAGGTGAGCGTGGAGATCGAG
 hu.11-C 1980 CTTTCAGTTCTGCCAAGTTTGCTTCTTCATCACACAGTATTCCACGGGGCAGGTGAGCGTGGAGATCGAG
 hu.10-C 1980 CTACAGTTCTGCCAAGTTTGCTTCTTCATCACACAGTATTCCACGGGGCAGGTGAGCGTGGAGATCGAG
 hu.4-C 1980 CTTTCAGTTCTGCCAAGTTTGCTTCTTCATCACACAGTATTCCACGGGGCAGGTGAGCGTGGAGATCGAG
 rh.54-D 1986 GTTTACGCCCTGCCAAGTTTGCTTCTTCATCACACAGTATACAGCACCGGCCAGGTGAGCGTGGAGATCGAG

FIG. 3C

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rh. 48-D 1986 GTTTACGCCCTGCCAAGTTTGCTTCTTTTCATCACACAGTACAGCACCCGGCCAGGTCAGCGTGGAGATCGAG
 rh. 55-D 1986 GTTTACGCCCTGCCAAGTTTGCTTCTTTTCATCACACAGTACAGCACCCGGCCAGGTCAGCGTGGAGATCGAG
 rh. 62-D 1986 GTTTACGCCCTGCCAAGTTTGCTTCTTTTCATCACACAGTACAGCACCCGGCCAGGTCAGCGTGGAGATCGAG
 AAV7-D 1986 GTTTACTCTCTGCCAAGTTTGCTTCGTTTCATCACACAGTACAGCACCCGGACAAAGTCAGCGTGGAAATCGAG
 rh. 52-E 1989 GTTCAACCAGGCCAAGCTGAATTTCTTCATCAGCAGTACAGCACCCGGACAAAGTCAGCGTGGAGATCGAG
 rh. 51-E 1989 GTTCAACCAGGCCAAGCTGAATTTCTTCATCAGCAGTACAGCACCCGGACAAAGTCAGCGTGGAGATCGAG
 hu. 39-E 1989 GTTCAACCAGGCCAAGCTGAATTTCTTCATCGGCAGTACAGCACCCGGACAAAGTCAGCGTGGAGATCGAG
 rh. 53-E 1989 GTTCAACCAGGCCAAGCTGAATTTCTTCATCAGCAGTACAGCACCCGGACAAAGTCAGCGTGGAGATCGAG
 hu. 37-E 1989 GTTCAGCCAGCGGAAATTTGGCTTCTTCATTACGCAGTACAGCACCCGGACAGGTCAGCGTGGAAATCGAG
 rh. 43-E 1983 CTTCAACCAGTCAAAGCTGAACTCTTTTCATCAGCAATACAGCACCCGGACAGGTCAGCGTGGAAATCGAA
 rh. 50-E 1989 GTTCAACCAGGCCAAGCTGAATTTCTTCATCAGCAGTACAGCACCCGGACAAAGTCAGCGTGGAGATCGAG
 rh. 49-E 1989 GTTCAACCAGGCCAAGCTGAATTTCTTCATCAGCAGTACAGCACCCGGACAAAGTCAGCGTGGAGATCGAG
 rh. 61-E 1989 GTTCAACCAGGCCAAGCTGAATTTCTTCATCAGCAGTACAGCACCCGGACAAAGTCAGCGTGGAGATCGAG
 hu. 41-E 1989 GTTCAGCCAGCGGAAATTTGGCTTCTTCATTACGCAGTACAGCACCCGGACAGGTCAGCGTGGAAATCGAG
 rh. 64-E 1989 GTTCAACCAGGCCAAGCTGAATTTCTTCATCAGCAGTACAGCACCCGGACAAAGTCAGCGTGGAGATCGTG
 hu. 42-E 1989 GTTCAGCCAGCGGAAATTTGGCTTCTTCATTACGCAGTACAGCACCCGGACAGGTCAGCGTGGAAATCGAG
 rh. 57-E 1989 GTTCAACCAGGCCAAGCTGAATTTCTTCATCAGCAGTACAGCACCCGGACAAAGTCAGCGGAGATCGAG
 hu. 40-E 1989 GTTCAGCCAGCGGAAATTTGGCTTCTTCATTACGCAGTACAGCACCCGGACAGGTCAGCGTGGAAATCGAG
 AAV8-E 1989 CTTCAACCAGTCAAAGCTGAACTCTTTTCATCAGCAATACAGCACCCGGACAGGTCAGCGTGGAAATCGAA
 rh. 58-E 1989 GTTCAACCAGGCCAAGCTGAATTTCTTCATCAGCAGTACAGCACCCGGACAAAGTCAGCGTGGAGATCGAG
 rh. 40-E 1989 GTTCAGCCAGCGGAAATTTGGCTTCTTCATCAGCAGTACAGCACCCGGCCAGGTCAGCGTGGAGATCGAG
 hu. 67-E 1989 GTTCAGCCAGCGGAAATTTGGCTTCTTCATTACGCAGTACAGCACCCGGACAGGTCAGCGTGGAAATCGAG
 hu. 17-E 1989 CTTCAGTCAAGCCAAGCTGGCGTCTTCATCAGCAGTACAGCACCCGGACAGGTCAGCGTGGAAATCGAA
 hu. 6-E 1989 CTTCAGTCAAGCCAAGCTGGCGTCTTCATCAGCAGTACAGCACCCGGACAGGTCAGCGTGGAAATCGAA
 hu. 66-E 1989 GTTCAGCCAGCGGAAATTTGGCTTCTTCATTACGCAGTACAGCACCCGGACAGGTCAGCGTGGAAATCGAG
 rh. 38-E 1989 GTTCAGCCAGCGGAAATTTGGCTTCTTCATTACGCAGTACAGCACCCGGACAGGTCAGCGTGGAAATCGAG
 hu. 32-F 1983 TTTCAATAAGGACAAAGCTGAACTCTTTTCATCAGCCAGTATTTCTACTGGCCAAAGTCAGCGTGGAGATTGAG
 AAV9/hu 1983 CTTCAACAAGGACAAAGCTGAACTCTTTTCATCAGCCAGTATTTCTACTGGCCAAAGTCAGCGTGGAGATCGAG
 hu. 31-F 1983 TTTCAATAAGGACAAAGCTGAACTCTTTTCATCAGCCAGTATTTCTACTGGCCAAAGTCAGCGTGGAGATTGAG

FIG. 3CE

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	2110	2120	2130	2140	2150	2160	2170
AAV5						
2017	TGGGAGCTCAAGAGGAAACTCCAAAGAGGTGGAACCCAGAGATCCAGTACACAACAACACTACAACGACC						
AAV3-3	2053	TGGGAGCTACAGAAAGAAACAGCAAAACGTTGGAATCCAGAGATTCACTACATCCAACTACAACAAGT					
AAV4-4	2047	TGGGAGATCCAGAGGAGCGGTCCAAACGCTGGAACCCCGAGGTCAGTTACCTCCAACCTACGGACAGC					
AAV1-A	2053	TGGGAGCTGCAGAAAGAAACAGCAAGCGCTGGAATCCCGAAGTGCAGTACACATCCAATTATGCAAAAT					
hu.46-A	2053	TGGGAGCTGCAGAAAGAAACAGCAAGCGCTGGAATCCCGAAGTGCAGTACACATCCAATTATGCAAAAT					
hu.48-A	2053	TGGGAGCTGCAGAAAGAAACAGCAAGCGCTGGAATCCCGAAGTGCAGTACACATCCAATTATGCAAAAT					
hu.44-A	2053	TGGGAGCTGCAGAAAGAAACAGCAAGCGCTGGAATCCCGAAGTGCAGTACACATCCAATTATGCAAAAT					
hu.43-A	2056	TGGGAGCTGCAGAAAGAAACAGCAAGCGCTGGAATCCCGAAGTGCAGTACACATCCAATTATGCAAAAT					
AAV6-A	2053	TGGGAGCTGCAGAAAGAAACAGCAAGCGCTGGAATCCCGAAGTGCAGTACATCTAACTATGCAAAAT					
hu.34-B	2050	TGGGAGCTGCAGAAAGAAACAGCAAGCGCTGGAATCCCGAAGTGCAGTACATCTCAACTACAACAAGT					
hu.47-B	2050	TGGGAGCTGCAGAAAGAAACAGCAAGCGCTGGAATCCCGAAGTGCAGTACATCTCAACTACAACAAGT					
hu.29-B	2050	TGGGAGCTGCAGAAAGAAACAGCAAGCGCTGGAATCCCGAAGTGCAGTACATCTCAACTACAACAAGT					
hu.63-B	2050	TGGGAGCTGCAGAAAGAAACAGCAAGCGCTGGAATCCCGAAGTGCAGTACATCTCAACTACAACAAGT					
hu.56-B	2050	TGGGAGCTGCAGAAAGAAACAGCAAGCGCTGGAATCCCGAAGTGCAGTACATCTCAACTACAACAAGT					
hu.45-B	2050	TGGGAGCTGCAGAAAGAAACAGCAAGCGCTGGAATCCCGAAGTGCAGTACATCTCAACTACAACAAGT					
hu.57-B	2047	TGGGAGCTGCAGAAAGAAACAGCAAGCGCTGGAATCCCGAAGTGCAGTACATCTCAACTACAACAAGT					
hu.35-B	2050	TGGGAGCTGCAGAAAGAAACAGCAAGCGCTGGAATCCCGAAGTGCAGTACATCTCAACTACAACAAGT					
hu.58-B	2050	TGGGAGCTGCAGAAAGAAACAGCAAGCGCTGGAATCCCGAAGTGCAGTACATCTCAACTACAACAAGT					
hu.28-B	2050	TGGGAGCTGCAGAAAGAAACAGCAAGCGCTGGAATCCCGAAGTGCAGTACATCTCAACTACAACAAGT					
hu.51-B	2050	TGGGAGCTGCAGAAAGAAACAGCAAGCGCTGGAATCCCGAAGTGCAGTACATCTCAACTACAACAAGT					
hu.19-B	2050	TGGGAGCTGCAGAAAGAAACAGCAAGCGCTGGAATCCCGAAGTGCAGTACATCTCAACTACAACAAGT					
hu.49-B	2050	TGGGAGCTGCAGAAAGAAACAGCAAGCGCTGGAATCCCGAAGTGCAGTACATCTCAACTACAACAAGT					
hu.52-B	2050	TGGGAGCTGCAGAAAGAAACAGCAAGCGCTGGAATCCCGAAGTGCAGTACATCTCAACTACAACAAGT					
hu.13-B	2050	TGGGAGCTGCAGAAAGAAACAGCAAGCGCTGGAATCCCGAAGTGCAGTACATCTCAACTACAACAAGT					
AAV2-B	2050	TGGGAGCTGCAGAAAGAAACAGCAAGCGCTGGAATCCCGAAGTGCAGTACATCTCAACTACAACAAGT					
hu.20-B	2050	TGGGAGCTGCAGAAAGAAACAGCAAGCGCTGGAATCCCGAAGTGCAGTACATCTCAACTACAACAAGT					
hu.24-B	2050	TGGGAGCTGCAGAAAGAAACAGCAAGCGCTGGAATCCCGAAGTGCAGTACATCTCAACTACAACAAGT					
hu.64-B	2050	TGGGAGCTGCAGAAAGAAACAGCAAGCGCTGGAATCCCGAAGTGCAGTACATCTCAACTACAACAAGT					

FIG. 3Cf

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hu. 27-B 2050 TGGGAGCTGCAGAAAGGAGAACAGCAAACGCTGGAATCCCGAAATTCCAGTACACTTCCAACACTACAACAAAT
 hu. 21-B 2050 TGGGAGCTGCAGAAAGGAGAACAGCAAACGCTGGAATCCCGAAATTCCAGTACACTTCCAACACTACAACAAAT
 hu. 22-B 2050 TGGGAGCTGCAGAAAGGAGAACAGCAAACGCTGGAATCCCGAAATTCCAGTACACTTCCAACACTACAACAAAT
 hu. 23-B 2050 TGGGAGCTGCAGAAAGGAGAACAGCAAACGCTGGAATCCCGAAATTCCAGTACACTTCCAACACTACAACAAAT
 hu. 7-C 2050 TGGGAGCTGCAGAAAGGAGAACAGCAAACGCTGGAATCCCGAAATTCCAGTACACTTCCAACACTACAACAAAT
 hu. 61-C 2050 TGGGAGCTGCAGAAAGGAGAACAGCAAACGCTGGAATCCCGAAATTCCAGTACACTTCCAACACTACAACAAAT
 rh. 56-C 2050 TGGGAGCTGCAGAAAGGAGAACAGCAAACGCTGGAATCCCGAAATTCCAGTACACTTCCAACACTACAACAAAT
 hu. 9-C 2050 TGGGAGCTGCAGAAAGGAGAACAGCAAACGCTGGAATCCCGAAATTCCAGTACACTTCCAACACTACAACAAAT
 hu. 54-C 2047 TGGGAGCTGCAGAAAGGAGAACAGCAAACGCTGGAATCCCGAAATTCCAGTACACTTCCAACACTACAACAAAT
 hu. 53-C 2047 TGGGAGCTGCAGAAAGGAGAACAGCAAACGCTGGAATCCCGAAATTCCAGTACACTTCCAACACTACAACAAAT
 hu. 60-C 2050 TGGGAGCTGCAGAAAGGAGAACAGCAAACGCTGGAATCCCGAAATTCCAGTACACTTCCAACACTACAACAAAT
 hu. 55-C 2047 TGGGAGCTGCAGAAAGGAGAACAGCAAACGCTGGAATCCCGAAATTCCAGTACACTTCCAACACTACAACAAAT
 hu. 2-C 2050 TGGGAGCTGCAGAAAGGAGAACAGCAAACGCTGGAATCCCGAAATTCCAGTACACTTCCAACACTACAACAAAT
 hu. 1-C 2050 TGGGAGCTGCAGAAAGGAGAACAGCAAACGCTGGAATCCCGAAATTCCAGTACACTTCCAACACTACAACAAAT
 hu. 18-C 2050 TGGGAGCTGCAGAAAGGAGAACAGCAAACGCTGGAATCCCGAAATTCCAGTACACTTCCAACACTACAACAAAT
 hu. 3-C 2053 TGGGAGCTGCAGAAAGGAGAACAGCAAACGCTGGAATCCCGAAATTCCAGTACACTTCCAACACTACAACAAAT
 hu. 25-C 2050 TGGGAGCTGCAGAAAGGAGAACAGCAAACGCTGGAATCCCGAAATTCCAGTACACTTCCAACACTACAACAAAT
 hu. 15-C 2050 TGGGAGCTGCAGAAAGGAGAACAGCAAACGCTGGAATCCCGAAATTCCAGTACACTTCCAACACTACAACAAAT
 hu. 16-C 2050 TGGGAGCTGCAGAAAGGAGAACAGCAAACGCTGGAATCCCGAAATTCCAGTACACTTCCAACACTACAACAAAT
 hu. 11-C 2050 TGGGAGCTGCAGAAAGGAGAACAGCAAACGCTGGAATCCCGAAATTCCAGTACACTTCCAACACTACAACAAAT
 hu. 10-C 2050 TGGGAGCTGCAGAAAGGAGAACAGCAAACGCTGGAATCCCGAAATTCCAGTACACTTCCAACACTACAACAAAT
 hu. 4-C 2050 TGGGAGCTGCAGAAAGGAGAACAGCAAACGCTGGAATCCCGAAATTCCAGTACACTTCCAACACTACAACAAAT
 rh. 54-D 2056 TGGGAGCTGCAGAAAGGAGAACAGCAAACGCTGGAATCCCGAAATTCCAGTACACTTCCAACACTACAACAAAT
 rh. 48-D 2056 TGGGAGCTGCAGAAAGGAGAACAGCAAACGCTGGAATCCCGAAATTCCAGTACACTTCCAACACTACAACAAAT
 rh. 55-D 2056 TGGGAGCTGCAGAAAGGAGAACAGCAAACGCTGGAATCCCGAAATTCCAGTACACTTCCAACACTACAACAAAT
 rh. 62-D 2056 TGGGAGCTGCAGAAAGGAGAACAGCAAACGCTGGAATCCCGAAATTCCAGTACACTTCCAACACTACAACAAAT
 AAV7-D 2056 TGGGAGCTGCAGAAAGGAGAACAGCAAACGCTGGAATCCCGAAATTCCAGTACACTTCCAACACTACAACAAAT
 rh. 52-E 2059 TGGGAGCTGCAGAAAGGAGAACAGCAAACGCTGGAATCCCGAAATTCCAGTACACTTCCAACACTACAACAAAT
 rh. 51-E 2059 TGGGAGCTGCAGAAAGGAGAACAGCAAACGCTGGAATCCCGAAATTCCAGTACACTTCCAACACTACAACAAAT
 hu. 39-E 2059 TGGGAGCTGCAGAAAGGAGAACAGCAAACGCTGGAATCCCGAAATTCCAGTACACTTCCAACACTACAACAAAT

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rh. 53-E	2059	TGGGAGCTGCAGAAAGGAGAAACAGCAAGCGCTGGAACCCAGAGATT	2210	2220	2230	2240
hu. 37-E	2059	TGGGAGCTGCAGAAAGGAGAAACAGCAACGCTGGAACCCAGAGATT				
rh. 43-E	2053	TGGGAGCTACAGAAAGGAGAAACAGCAAGCGCTGGAACCCGAGATCC				
rh. 50-E	2059	TGGGAGCTGCAGAAAGGAGAAACAGCAAGCGCTGGAGCCGAGATT				
rh. 49-E	2059	TGGGAGCTGCAGAAAGGAGAAACAGCAAGCGCTGGAACCCAGAGATT				
rh. 61-E	2059	TGGGAGCTGCAGAAAGGAGAAACAGCAAGCGCTGGAACCCAGAGATT				
hu. 41-E	2059	TGGGAGCTGCAGAAAGGAGAAACAGCAACGTTGGAACCCAGAGATT				
rh. 64-E	2059	TGGGAGCTGCAGAAAGGAGAAACAGCAAGCGCAGGAACCCAGAGATT				
hu. 42-E	2059	TGGGAGCTGCAGAAAGGAGAAACAGCAACGCTGGAACCCAGAGATT				
rh. 57-E	2059	TGGGAGCTGCAGAAAGGAGAAACAGCAAGCGCTGGAACCCAGAGATT				
hu. 40-E	2059	TGGGAGCTGCAGAAAGGAGAAACAGCAACGCTGGAACCCAGAGATT				
AAV8-E	2059	TGGGAGCTGCAGAAAGGAGAAACAGCAAGCGCTGGAACCCGAGATCC				
rh. 58-E	2059	TGGGAGCTGCAGAAAGGAGAAACAGCAAGTGTGGAACCCAGAGATT				
rh. 40-E	2059	TGGGAGCTGCAGAAAGGAGAAACAGCAAGCGATGGAACCCAGAAATT				
hu. 67-E	2059	TGGGAGCTGCAGAAAGGAGAAACAGCAACGCTGGAACCCAGAGATT				
hu. 17-E	2059	TGGGAGCTGCAGAAAGGAGAAACAGCAAGCGCTGGAACCCAGAGATT				
hu. 6-E	2059	TGGGAGCTGCAGAAAGGAGAAACAGCAAGCGCTGGAACCCAGAGATT				
hu. 66-E	2059	TGGGAGCTGCAGAAAGGAGAAACAGCAACGCTGGAACCCAGAGATT				
rh. 38-E	2059	TGGGAGCTGCAGAAAGGAGAAACAGCAACGCTGGAACCCAGAGATT				
hu. 32-F	2053	TGGGAGCTGCAGAAAGGAGAAACAGCAAGCGCTGGAACCCGAGATCC				
AAV9/hu	2053	TGGGAGCTGCAGAAAGGAGAAACAGCAAGCGCTGGAACCCGAGATCC				
hu. 31-F	2053	TGGGAGCTGCAGAAAGGAGAAACAGCAAGCGCTGGAACCCGAGATCC				

		2180	2190	2200	2210	2220	2230	2240
							
AAV5	2087	CCCAAGTTTGTGGACTTTGCCCGGACAGCACCGGGGAATACAGAACCC						
AAV3-3	2123	CTGTTAATGTGGACTTTACTGTAGACACATAATGGTGTTTATAGTGA						
AAV4-4	2117	AAACTCTCTGTTGTGGGCTCCCGATGCGGCTGGGAAATACACTGAG						
AAV1-A	2123	CTGCCAACGTTGATTTTACTGTGGACAAACAATGGACTTTTATACT						
hu. 46-A	2123	CTGCCAACGTTGATTTTACTGTGGACAAACAATGGACTTTTATACT						

FIG. 3C

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hu. 48-A 2123 CTGCCAACGTTGATTTTACTGTGGACAACAATGGACTTTATATACTGAGCCTCGCCCCCATTTGGCACCCCGTTA
 hu. 44-A 2123 CTGCCAACGTTGATTTTACTGTGGACAACAATGGACTTTATATACTGAGCCTCGCCCCCATTTGGCACCCCGTTA
 hu. 43-A 2126 CTGCCAGCGTTGATTTTACTGTGGACAACAATGGACTTTATATACTGAGCCTCGCCCCCATTTGGCACCCCGTTA
 AAV6-A 2123 CTGCCAACGTTGATTTTACTGTGGACAACAATGGACTTTATATACTGAGCCTCGCCCCCATTTGGCACCCCGTTA
 hu. 34-B 2120 CTGTTAATGTGGACTTTACTGTGGACACTAATGGCGTGTATTCAGAGCCTCGCCCCCATTTGGCACCCAGATA
 hu. 47-B 2120 CTGTTAATGTGGACTTTACTGTGGACACTAATGGCGTGTATTCAGAGCCTCGCCCCCATTTGGCACCCAGATA
 hu. 29-B 2120 CTGTTAATGTGGACTTTACTGTGGACACTAATGGCGTGTATTCAGAGCCTCGCCCCCATTTGGCACCCAGATA
 hu. 63-B 2120 CTGTTAATGTGGACTTTACTGTGGACACTAATGGTGTGTATTCAGAGCCTCGCCCCCATTTGGCACCCAGATA
 hu. 56-B 2120 CTGTTAATGTGGACTTTACTGTGGACACTAATGGGGTGTATTCAGAGCCTCGCCCCCATTTGGCACCCAGATA
 hu. 45-B 2120 CTGTTAATGTGGACTTTACTGTGGACACTAATGGCGTGTATTCAGAGCCTCGCCCCCATTTGGCACCCAGATA
 hu. 57-B 2117 CTGTTAATGTGGACTTTACTGTGGACACTAATGGGGTGTATTCAGAGCCTCGCCCCCATTTGGCACCCAGATA
 hu. 35-B 2120 CTGTTAATGTGGACTTTACTGTGGACACTAATGGCGTGTATTCAGAGCCTCGCCCCCATTTGGCACCCAGATA
 hu. 58-B 2120 CTGTTAATGTGGACTTTACTGTGGACACTAATGGTGTGTATTCAGAGCCTCGCCCCCATTTGGCACCCAGATA
 hu. 28-B 2120 CTGTTAATGTGGACTTTACTGTGGACACTAATGGCGTGTATTCAGAGCCTCGCCCCCATTTGGCACCCAGATA
 hu. 51-B 2120 CTGTTAATGTGGACTTTACTGTGGACACTAATGGCGTGTATTCAGAGCCTCGCCCCCATTTGGCACCCAGATA
 hu. 19-B 2120 CTGTTAATGTGGACTTTACTGTGGACACTAATGGTGTGTATTCAGAGCCTCGCCCCCATTTGGCACCCAGATA
 hu. 49-B 2120 CTGTTAATGTGGACTTTACTGTGGACACTAATGGTGTGTATTCAGAGCCTCGCCCCCATTTGGCACCCAGATA
 hu. 52-B 2120 CTGTTAATGTGGACTTTACTGTGGACACTAATGGCGTGTATTCAGAGCCTCGCCCCCATTTGGCACCCAGATA
 hu. 13-B 2120 CTGTTAATGTGGACTTTACTGTGGACACTAATGGCGTGTATTCAGAGCCTCGCCCCCATTTGGCACCCAGATA
 AAV2-B 2120 CTGTTAATGTGGACTTTACTGTGGACACTAATGGCGTGTATTCAGAGCCTCGCCCCCATTTGGCACCCAGATA
 hu. 20-B 2120 CTGTTAATGTGGACTTTACTGTGGACACTAATGGTGTGTATTCAGAGCCTCGCCCCCATTTGGCACCCAGATA
 hu. 24-B 2120 CTGTTAATGTGGACTTTACTGTGGACACTAATGGTGTGTATTCAGAGCCTCGCCCCCATTTGGCACCCAGATA
 hu. 64-B 2120 CTGTTAATGTGGACTTTACTGTGGACACTAATGGTGTGTATTCAGAGCCTCGCCCCCATTTGGCACCCAGATA
 hu. 27-B 2120 CTGTTAATGTGGACTTTACTGTGGACACTAATGGTGTGTATTCAGAGCCTCGCCCCCATTTGGCACCCAGATA
 hu. 21-B 2120 CTGTTAATGTGGACTTTACTGTGGACACTAATGGTGTGTATTCAGAGCCTCGCCCCCATTTGGCACCCAGATA
 hu. 22-B 2120 CTGTTAATGTGGACTTTACTGTGGACACTAATGGTGTGTATTCAGAGCCTCGCCCCCATTTGGCACCCAGATA
 hu. 23-B 2120 CTGTTAATGTGGACTTTACTGTGGACACTAATGGTGTGTATTCAGAGCCTCGCCCCCATTTGGCACCCAGATA
 hu. 7-C 2120 CTGTTAATGTGGACTTTACTGTGGACACTAATGGCGTGTATTCAGAGCCTCGCCCCCATTTGGCACCCAGATA
 hu. 61-C 2120 CTGTTAATGTGGACTTTACTGTGGACACTAATGGTGTGTATTCAGAGCCTCGCCCCCATTTGGCACCCAGATA
 rh. 56-C 2120 CTGTTAATGTGGACTTTACTGTGGACACTAATGGCGTGTATTCAGAGCCTCGCCCCCATTTGGCACCCAGATA

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hu. 9-C	2120	CTGTTAATGTGGACTTTACTGTGGACACTAAATGGTGTGTATTCAGAGCCTTGCCCCCATTTGGCACCAGATA
hu. 54-C	2117	CTGTTAATGTGGACTTTACTGTGGACACTAAATGGTGTGTATTCAGAGCCTCGCCCCCATTTGGCACCAGATA
hu. 53-C	2117	CTGTTAATGTGGACTTTACTGTGGACACTAAATGGTGTGTATTCAGAGCCTCGCCCCCATTTGGCACCAGATA
hu. 60-C	2120	CTGTTAATGTGGACTTTACTGTGGACACTAAATGGTGTGTATTCAGAGCCTCGCCCCCATTTGGCACCAGATA
hu. 55-C	2117	CTGTTAATGTGGACTTTACTGTGGACACTAAATGGTGTGTATTCAGAGCCTCGCCCCCATTTGGCACCAGATA
hu. 2-C	2120	CTGTTAATGTGGACTTTACTGTGGACACTAAATGGTGTGTATTCAGAGCCTCGCCCCCATTTGGCACCAGATA
hu. 1-C	2120	CTGTTAATGTGGACTTTACTGTGGACACTAAATGGTGTGTATTCAGAGCCTCGCCCCCATTTGGCACCAGATA
hu. 18-C	2120	CTGTTAATGTGGACTTTACTGTGGACACTAAATGGTGTGTATTCAGAGCCTCGCCCCCATTTGGCACCAGATA
hu. 3-C	2123	CTGTTAATGTGGACTTTACTGTGGACACTAAATGGTGTGTATTCAGAGCCTCGCCCCCATTTGGCACCAGATA
hu. 25-C	2120	CTGTTAATGTGGACTTTACTGTGGACACTAAATGGCGTGTACTCAGAGCCTCGCCCCCATTTGGCACCAGATA
hu. 15-C	2120	CTGTTAATGTGGACTTTACTGTGGACACTAAATGGTGTGTATTCAGAGCCTCGCCCCCATTTGGCACCAGATA
hu. 16-C	2120	CTGTTAATGTGGACTTTACTGTGGACACTAAATGGTGTGTATTCAGAGCCTCGCCCCCATTTGGCACCAGATA
hu. 11-C	2120	CTGTTAATGTGGACTTTACTGTGGACACTAAATGGTGTGTATTCAGAGCCTCGCCCCCATTTGGCACCAGATA
hu. 10-C	2120	CTGTTAATGTGGACTTTACTGTGGACACTAAATGGTGTGTATTCAGAGCCTCGCCCCCATTTGGCACCAGATA
hu. 4-C	2120	CTGTTAATGTGGACTTTACTGTGGACACTAAATGGTGTGTATTCAGAGCCTCGCCCCCATTTGGCACCAGATA
rh. 54-D	2126	AGACTGGTGTGGACTTTGCCGTTGACAGCCAGGGTGTATTCTGAGCCTCGCCCCCATTTGGTACTCGTTA
rh. 48-D	2126	AGACTGGTGTGGACTTTGCCGTTGACAGCCAGGGTGTATTCTGAGCCTCGCCCCCATTTGGTACTCGTTA
rh. 55-D	2126	AGACTGGTGTGGACTTTGCCGTTGACAGCCAGGGTGTATTCTGAGCCTCGCCCCCATTTGGTACTCGTTA
rh. 62-D	2126	AGACTGGTGTGGACTTTGCCGTTGACAGCCAGGGTGTATTCTGAGCCTCGCCCCCATTTGGTACTCGTTA
AAV7-D	2126	AGACTGGTGTGGACTTTGCCGTTGACAGCCAGGGTGTATTCTGAGCCTCGCCCCCATTTGGCACTCGTTA
rh. 52-E	2129	CTACAAATGTGGACTTTGCTGTTAATACTGAGGGTGTATTCTGAGCCTCGCCCCCATTTGGCACTCGTTA
rh. 51-E	2129	CTACAAATGTGGACTTTGCTGTTAATACTGAGGGTGTATTCTGAGCCTCGCCCCCATTTGGCACTCGTTA
hu. 39-E	2129	CTACAAATGCGGACTTTGCTGTTAATACTGAGGGTGTATTCTGAGCCTCGCCCCCATTTGGCACTCGTTA
rh. 53-E	2129	CTACAAATGTGGACTTTGCTGTTAATACTGAGGGTGTATTCTGAGCCTCGCCCCCATTTGGCACTCGTTA
hu. 37-E	2129	CTACAAATGTGGACTTTGCTGTTAATACTGAGGGTGTATTCTGAGCCTCGCCCCCATTTGGTACTCGTTA
rh. 43-E	2123	CTACAAATGTGGACTTTGCTGTTAATACTGAGGGTGTATTCTGAGCCTCGCCCCCATTTGGCACCCTGTTA
rh. 50-E	2129	CTACAAATGTGGACTTTGCTGTTAATACTGAGGGTGTATTCTGAGCCTCGCCCCCATTTGGCACTCGTTA
rh. 49-E	2129	CTACAAATGTGGACTTTGCTGTTAATACTGAGGGTGTATTCTGAGCCTCGCCCCCATTTGGCACTCGTTA
rh. 61-E	2129	CTACAAATGTGGACTTTGCTGTTAATACTGAGGGTGTATTCTGAGCCTCGCCCCCATTTGGCACTCGTTA
hu. 41-E	2129	CTACAAATGTGGACTTTGCTGTTAATACTGAGGGTGTATTCTGAGCCTCGCCCCCATTTGGTACTCGTTA

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rh. 64-E 2129 CTACAAATGTGGACTTTGCTGTTAATACTAGAGGGTGTACTCTGAGCCTCGCCCCCATTTGGCACTCGTTA
 hu. 42-E 2129 CTACAAATGTGGACTTTGCTGTTCAATACAGAGGGAACCTATTCTGAGCCTCGCCCCCATTTGGTACTCGTTA
 rh. 57-E 2129 CTACAAATGTGGACTTTGCTGTTAATACTAGAGGGTGTACTCTGAGCCTCGCCCCCATTTGGCACTCGTTA
 hu. 40-E 2129 CTACAAATGTGGACTTTGCTGTTCAATACAGAGGGAACCTATTCTGAGCCTCGCCCCCATTTGGTACTCGTTA
 AAV8-E 2129 CTACAAAGTGTGGACTTTGCTGTTAATAACAGAGGCGGTACTCTGAACCCCGCCCCCATTTGGCACCCGTTA
 rh. 58-E 2129 CTACAAATGTGGACTTTGCTGTTAATACTAGAGGGTGTACTCTGAGCCTCGCCCCCATTTGGCACTCGTTA
 rh. 40-E 2129 CTACAAATGTGGACTTTGCTGTTCAATTCTGAGGGTACATATTCAGAGCCTCGCCCCCATTTGGTACTCGTTA
 hu. 67-E 2129 CTACAAATGTGGACTTTGCTGTTCAATACAGAGGGAACCTATTCTGAGCCTCGCCCCCATTTGGTACTCGTTA
 hu. 17-E 2129 CTGTTAATGTGGACTTTACTGTGGACACTAATGGTGTGTATTTCAGAGCCTCGCCCCCATTTGGCACCCAGATA
 hu. 6-E 2129 CTACAAATGTGGACTTTGCTGTTCAATACTAGAGGGTACTTATTTCAGAGCCTCGCCCCCATTTGGCACCCGTTA
 hu. 66-E 2129 CTACAAATGTGGACTTTGCTGTTCAATACAGAGGGAACCTATTCTGAGCCTCGCCCCCATTTGGTACTCGTTA
 rh. 38-E 2129 CTACAAATGTGGACTTTGCTGTTCAATACAGAGGGAACCTATTCTGAGCCTCGCCCCCATTTGGTACTCGTTA
 hu. 32-F 2123 CTAATAAATGTTGAATTTGCTGTTAATACTGAAGGTGTATATAGTGAACCCCGCCCCCATTTGGCACCCAGATA
 AAV9/hu 2123 CTAATAAATGTTGAATTTGCTGTTAATACTGAAGGTGTATATAGTGAACCCCGCCCCCATTTGGCACCCAGATA
 hu. 31-F 2123 CTAATAAATGTTGAATTTGCTGTTAGTACTGAAGGTGTATATAGTGAACCCCGCCCCCATTTGGCACCCAGATA

2250 · 2260

....|....|....|....|
 AAV5 2157 CCTTACCCGACCCCTT----
 AAV3-3 2193 TCTCACACGAAACTTG----
 AAV4-4 2187 CCTACCCACCCACCTGTAA-
 AAV1-A 2193 CCTTACCCGTCCTCCCTGTAA-
 hu. 46-A 2193 CCTTACCCGTCCTCCCTGTAA-
 hu. 48-A 2193 CCTTACCCGTCCTCCCTGTAA-
 hu. 44-A 2193 CCTTACCCGTCCTCCCTGTAA-
 hu. 43-A 2196 CCTTACCCGTCCTCCCTGTAA-
 AAV6-A 2193 CCTCACCCGTCCTCCCTGTAA-
 hu. 34-B 2190 CTGACTCGTAATCTGTAA-
 hu. 47-B 2190 CTGACTCGTAATCTGTAA-
 hu. 29-B 2190 CTGACTCGTAATCTGTAA-

FIG. 3CK

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hu.63-B	2190	CCTGACTCGTAATCTGTAA-
hu.56-B	2190	CCTGACTCGTAATCTGTAA-
hu.45-B	2190	CCTGACTCGTAATCTGTAA-
hu.57-B	2187	CCTGACTCGTAATCTGTAA-
hu.35-B	2190	CCTGACTCGTAATCTGTAA-
hu.58-B	2190	CCTGACTCGTAATCTGTAA-
hu.28-B	2190	CCTGACTCGTAATCTGTAA-
hu.51-B	2190	CCTGACTCGTAATCTGTAA-
hu.19-B	2190	CCTGACTCGTAATCTGTAA-
hu.49-B	2190	CCTGACTCGTAATCTGTAA-
hu.52-B	2190	CCTGACTCGTAATCTGTAA-
hu.13-B	2190	CCTGACTCGTAATCTGTAA-
AAV2-B	2190	CCTGACTCGTAATCTGTAA-
hu.20-B	2190	CCTGACTCGTAATCTGTAA-
hu.24-B	2190	CCTGACTCGTAATCTGTAA-
hu.64-B	2190	CCTGACTCGTAATCTGTAA-
hu.27-B	2190	CCTGACTCGTAATCTGTAA-
hu.21-B	2190	CCTGACTCGTAATCTGTAA-
hu.22-B	2190	CCTGACTCGTAATCTGTAA-
hu.23-B	2190	CCTGACTCGTAATCTGTAA-
hu.7-C	2190	CCTGACTCGTAATCTGTAA-
hu.61-C	2190	CCTGACTCGTAATCTGTAA-
rh.56-C	2190	CCTGACTCGTAATCTGTAA-
hu.9-C	2190	CCTGACTCGTAATCTGTAA-
hu.54-C	2187	CCTGACTCGTAATCTGTAA-
hu.53-C	2187	CCTGACTCGTAATCTGTAA-
hu.60-C	2190	CCTGACTCGTAATCTGTAA-
hu.55-C	2187	CCTGACTCGTAATCTGTAA-
hu.2-C	2190	CCTGACTCGTAATCTGTAA-
hu.1-C	2190	CCTGACTCGTAATCTGTAA-

FIG. 3CL

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hu.18-C	2190	CCGACTCGTAATCTGTAA-
hu.3-C	2193	CCTGACTCGTAATCTGTAA-
hu.25-C	2190	CCTGACTCGTAATCTGTAA-
hu.15-C	2190	CCTGACTCGTAATCTGTAA-
hu.16-C	2190	CCTGACTCGTAATCTGTAA-
hu.11-C	2190	CCTGACTCGTAATCTGTAA-
hu.10-C	2190	CCTGACTCGTAATCTGTAA-
hu.4-C	2190	CCTGACTCGTAATCTGTAA-
rh.54-D	2196	CCTCACCCGTAATCTGTAA-
rh.48-D	2196	CCTCACCCGTAATCTGTAA-
rh.55-D	2196	CCTCACCCGTAATCTGTAA-
rh.62-D	2196	CCTCACCCGTAATCTGTAA-
AAV7-D	2196	CCTCACCCGTAATCTGTAA-
rh.52-E	2199	CCTCACCCGTAATCTGTAA-
rh.51-E	2199	CCTCACCCGTAATCTGTAA-
hu.39-E	2199	CCTCACCCGTAATCTGTAA-
rh.53-E	2199	CCCCACCCGTAATCTGTAA-
hu.37-E	2199	CCTCACCCGTAATCTGTAA-
rh.43-E	2193	CCTCACCCGTAATCTGTAA-
rh.50-E	2199	CCTCACCCGTAATCTGTAA-
rh.49-E	2199	CCTCACCCGTAATCTGTAA-
rh.61-E	2199	CCTCACCCGTAATCTGTAA-
hu.41-E	2199	CCTCACCCGTAATCTGTAA-
rh.64-E	2199	CCTCACCCGTAATCTGTAA-
hu.42-E	2199	CCTCACCCGTAATCTGTAA-
rh.57-E	2199	CCTCACCCGTAATCTGTAA-
hu.40-E	2199	CCTCACCCGTAATCTGTAA-
AAV8-E	2199	CCTCACCCGTAATCTGTAA-
rh.58-E	2199	CCTCACCCGTAATCTGTAA-
rh.40-E	2199	CTGACACGTAATCTGTAA-

FIG. 3CM

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hu.67-E	2199	CCTCACCCCGTAATCTGTAA-
hu.17-E	2199	CCTGACTCGTAATCTGTAA-
hu.6-E	2199	CCTCACCCCGTAACCTGTAA-
hu.66-E	2199	CCTCACCCCGTAATCTGTAA-
rh.38-E	2199	CCTCACCCCGTAATCTGTAA-
hu.32-F	2193	CCTGACTCGTAATCTGTAA-
AAV9/hu	2193	CCTGACTCGTAATCTGTAA-
hu.31-F	2193	CCTGACTCGTAATCTGTAA-

FIG. 3CN

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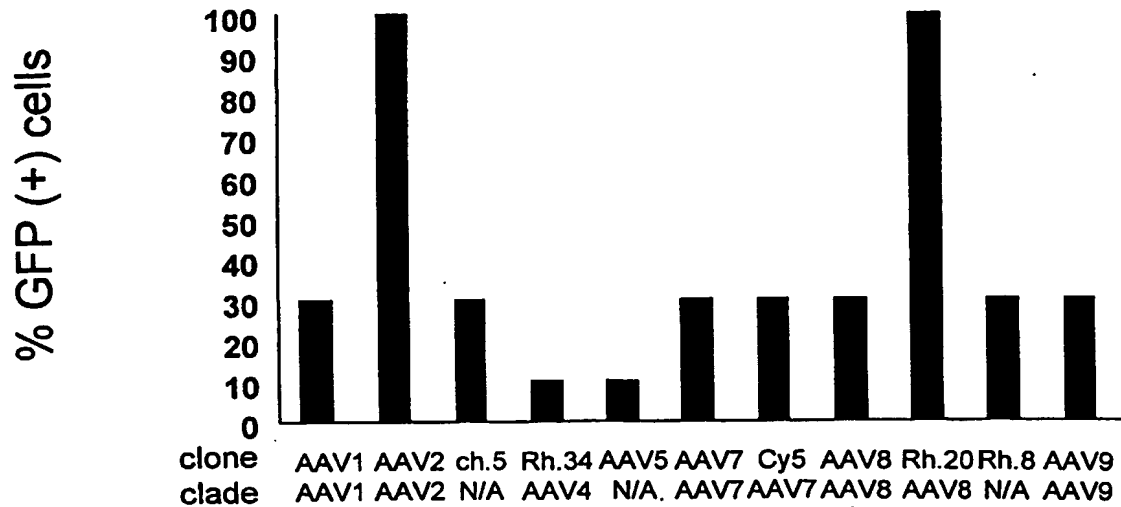


Fig. 4A

In Vitro

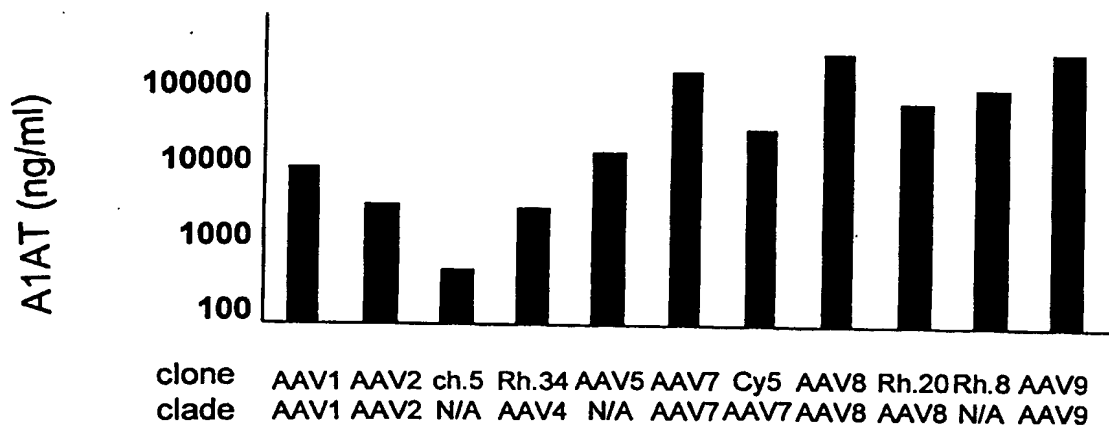


Fig. 4B

Liver

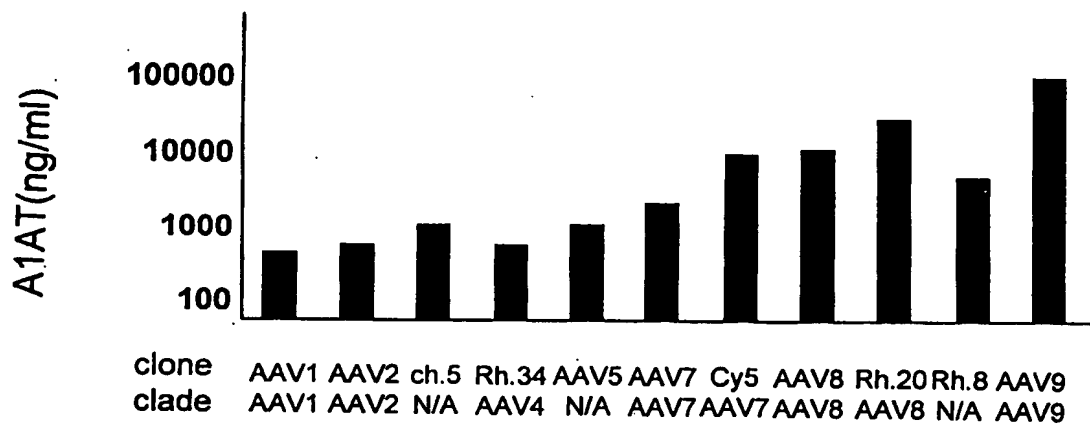


Fig. 4C

Lung

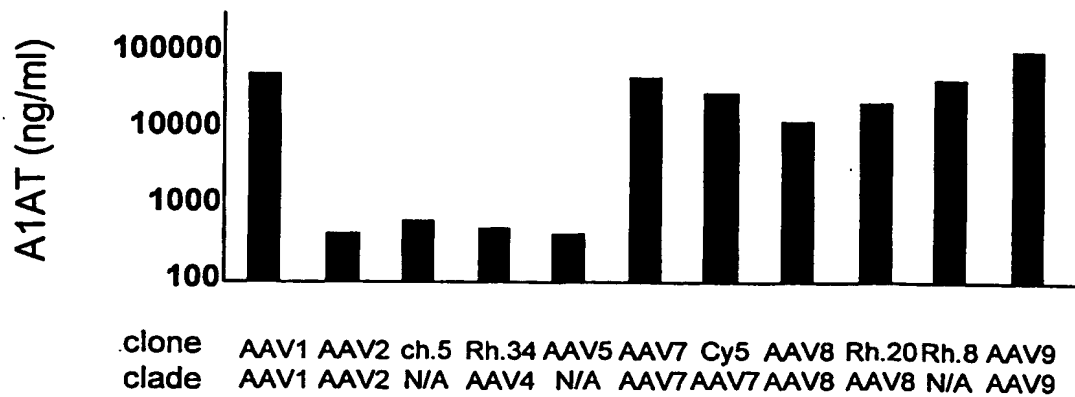


Fig. 4D

Muscle

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